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Motivational and cognitive components of self-presentation in humor and embarrassment: A multi-measure approach

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MOTIVATIONAL AND COGNITIVE COMPONENTS OF SELF PRESENTATION IN HUMOR AND EMBARRASSMENT: A MULTI-MEASURE APPROACH

BY

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DISSERTATION

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For my parents, because
the most important things
I know I learned from them.

And to Charlie and Tekla,
because it is finally
National Hot Pot Lid Day.

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I have often told people that moving to New Hampshire was one of the most difficult things I have ever done. Being away from my family has been hard, and at times I wondered why I was doing it. But through these long five years, my family gave me the love, encouragement and support that they always have, and I thank them for that.

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OF SELF PRESENTATION
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by

Mae Lynn Neyhart
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Different methodological approaches were taken to explore the role of situational variables and personality factors that measure the motivational component of self presentation on degree of subjects' reported feelings of threat and their response time to complete self-directed humorous or embarrassing situations. In Study 1 a questionnaire approach was utilized and qualitative as well as quantitative data was analyzed. Specifically, humorous and embarrassing situations that male and female subjects provided were compared. Relations were found between personality measures and reported degree of threat. Study 2 included a response time measure and number of times a subject made another person the target of the situation as dependent measures in addition to the threat measure. It was found that the threat measure was affected most by the personality factors. When controlling for motivation (personality) and threat (affect), there were still

significant effects for condition on response time. Subjects took longer to complete embarrassing than humorous situations. This result suggests that there are cognitive elements involved in self presentation. In Study 3, degree of threat posed by the companion was manipulated. While there were no effects for threat, when motivation and affect were controlled for, there were significant companion gender by degree of threat interactions for response time and number of reversals. Subjects took longer to complete humorous situations when they were with high threat females and low threat males, and they also performed fewer reversals when they were with low threat females than any other companion. It is suggested that this interaction has its basis in cognitive processing. Implications of this research for continuing to explore the role of both motivation and cognition in self presentation are discussed.

I. GENERAL INTRODUCTION

Researchers in social psychology focus on the motivational aspect of self presentation. They measure different aspects of self presentation by how much an individual needs to appear to others that he or she possesses certain qualities. For example, many theories in social psychology assume that people are motivated to protect and enhance their self-esteem (Greenberg, Pyszczynski, & Solomon, 1986; Greenberg, Pyszczynski, & Stine, 1985; Rosenberg, 1979; Solomon, Greenberg, & Pyszczynski, in press; Zuckerman, 1979). Self-esteem maintenance as a primary motive in human behavior has "achieved the status of an axiom within personality and social psychology" (Leary & Kowalski, 1990, p. 37). According to self presentation theorists, an individual's self-esteem is at risk in every social situation. When threats to self-esteem arise, something must be done to salvage it. Some of the strategies people use to maintain self-esteem in the face of threat are excuse making (Smith & Whitehead, 1988; Snyder & Higgins, 1988; Whitehead & Smith, 1990), self-serving attributions (Fiske & Taylor, 1984; Miller & Ross, 1978), self-handicapping strategies (Berglas & Jones, 1978) and compensatory impression management or self-inflation (Baumeister & Jones, 1978; Greenberg & Pyszczynski, 1985). Motivation is invoked as the underlying

cause of these strategies.

A second theoretical viewpoint in social psychology is the cognitive perspective (Markus & Zajonc, 1985). Cognitive theories emphasize how our social behavior is affected by our cognitive limitations for information processing. Response time is one of the two main dependent measures in the field of cognitive psychology (Best, 1986) and has been used extensively in general experimental cognitive psychology as a measure of cognitive accessability, for example in priming studies (Meyer & Schvaneveldt, 1971) or as a measure of mental activity such as mental rotation (Shepard & Metzler, 1971).

At present, as interest in cognitive processes in social interaction increases (see Markus & Zajonc, 1985), response time has become very popular in social psychology laboratories (Fazio, 1990). It has been used to explore spontaneous construct formation (Fazio, Lenn & Effrein, 1984), to assess subjects' efficiency at making social judgments (Smith & Lerner, 1986), and to measure strength of association in memory between an attitude object and a subject's evaluation of that object (Fazio, 1989). As is evident by the variety of topics that have been studied with response time, it is a flexible tool with much potential for use in different research areas. Fazio (1990) recommended that social psychologists continue to use the measure to explore central issues in the field.

The present studies will test whether threats to self-esteem in imagined social predicaments affect the amount of time that subjects take to think of humorous or embarrassing endings for those situations when motivation and affect are controlled for. This is important because response time is typically used as a measure of cognitive processing. If there are differences, it would suggest that there is a cognitive component, as well as a motivational component, active in self presentation.

In a recent review, Leary and Kowalski (1990) defined self presentation as the process by which individuals attempt to control the impressions others form of them. Self presentation is designed to communicate some information about the self or image of the self to others (Baumeister 1982, 1986; Jones & Pittman, 1982; Schlenker, 1980; Tedeschi, 1981). Impression management theorists even characterize subjects' responses to self-report scales as acts of self presentation (Baumeister, Tice, & Hutton, 1989; Cheek & Hogan, 1984).

Preliminary evidence that self presentation concerns may arise in hypothetical situations was provided by Neyhart (1985) who demonstrated that men took more time to begin writing endings for self-directed humorous situations (that is, a situation in which the self is the butt of a humorous situation) and less time to think of endings for situations in which a friend was the butt of the humor. Women, on the

other hand, took longer to provide endings for friend-directed than self-directed situations.

In terms of self presentation, one could think of the men in the Neyhart (1985) study as attempting to project a competitive and possibly even self-enhancing image. They seem to be threatened by the thought of placing themselves in an awkward social situation. The female subjects' "reluctance" (i.e. long reaction time) to place their friend in a potentially embarrassing situation could be seen as trying to project a nurturant image.

However, these results can also be explained from the cognitive perspective. Earlier findings were explained (Neyhart, under review) in terms of Bem's Gender Schema theory (1981). The data showed that only subjects who had been classified as "gender schematic" (masculine males and feminine females as opposed to androgynous or cross-sex typed subjects) demonstrated trait-consistent reaction times. The experimental situation, disguised as a humor study, kept subjects unaware that sex roles were of interest, yet the behavior of those who presented a stereotypical masculine or feminine image was consistent with their self-schemas.

From the self presentation viewpoint, subjects' behavior was consistent with the way they presented themselves to the experimenter through the personality inventory. The fact that this happens without subjects'

awareness is consistent with Bem and Bem's (1970) assertion that gender relevant behavior is a result of a "non-conscious ideology, a set of beliefs and values which we accept implicitly but which remains outside of our consciousness..."(p. 89).

In light of the impression management interpretation of personality scales (Cheek & Hogan, 1984; Paulhus, 1986), the possibility arises that subjects in the Neyhart (1985) study were simply presenting themselves according to their self-concept twice (that is, during the humor task as well as when they were responding to the BSRI). If subjects endorse items on a scale that describe them as "nurturant", it follows that their subsequent behavior (on the humor task) should be consistent with those self-reports. In support of this viewpoint, Leary and Kowalski have stated that "the self-concept is a primary determinant of the impressions people try to project" (1990, p. 40). Because of these findings, the present studies will attempt to find relations between other personality measures and subjects' responding in this paradigm.

It is clear that both motivational and cognitive elements are at work in self presentation. It would be interesting to attempt to separate the relative contribution of each.

Situational Variables

Subsequent studies (Neyhart, 1990) manipulated variables in the hypothetical situation, and observed the impact of these variables on reaction times to complete the scenarios. In one experiment, the gender of the subjects' imagined companion in the hypothetical situation was varied. Some subjects were told to imagine that they were with a male friend, others with a female friend. Male subjects who imagined themselves with a male companion took longer to think of a self-directed ending than the male subjects who were imagining a female companion. The male subjects imagining a female friend took more time with the friend-directed situation than the self-directed situation. This was a surprising shift, because in previous experiments (in which a same sex companion was imagined), males took longer in the self-directed condition than the other-directed condition. Females consistently took longer to think of an other-directed ending, regardless of the gender of the companion they imagined. Therefore, this study showed male subjects to be more influenced by the gender of companion than females.

An interesting question that remains to be explored is why men respond differently depending on the gender of their companion, and women do not. One way of explaining this finding is in impression management terms. It seems that men in the "male friend" condition are more threatened by

appearing incompetent and thus may feel the need to manage a "masculine" impression. Therefore, they are less willing to put themselves in an awkward position when they imagine themselves with a male friend than when they imagine themselves with a female friend. Perhaps men are more concerned with maintaining their self image in the presence of another man than in the presence of a woman. It may be more acceptable for a male to be seen as vulnerable by females, but not by other males. Females, on the other hand, seem to remain characteristically nurturant or sensitive to their friend's feelings, regardless of that friend's gender.

Personality Scales and Impression Management

One of the main purposes of the present studies is to attempt to fit earlier findings (Neyhart, 1985, 1988, 1990) into a broader theoretical context. Since it was possible to explain the response time behavior of gender schematic men and women, it seems that it should be possible to make predictions about the behavior of subjects who hold different beliefs about themselves. But, as mentioned, scales which measure impression management are measuring motivational constructs. An interesting question is whether scores on these scales will be predictive of response time, as gender schema (which measures a cognitive structure) is.

Several personality measures which are relevant to impression management will be utilized in these studies, and

their relation to subjects' behavior on the response time task will be assessed. But, first it is necessary to introduce the measures to be used.

Social Anxiety

Most people have experienced social anxiety. It can be called stage fright, speech anxiety, or shyness. According to Schlenker and Leary (1982, 1985) social anxiety arises in real or imagined social situations when people are motivated to make a desired impression on others but doubt that they will do so. As a result, they perceive negative evaluations from subjectively important audiences.

Schlenker and Leary (1985) proposed several personality as well as situational antecedents of social anxiety. The first of these is the significance of the audience to the actor. If the audience is powerful, attractive, or expert, then a person would be expected to feel more social anxiety when with an audience that does have these characteristics than one who does not. According to Schlenker and Leary, the presence of this type of audience will increase both the motivation to create a desired impression and one's doubts that he or she will be able to do so.

The evaluative implications of the performance for the self is also important. Any variable that increases the importance of the goal of creating a desired impression would be included here. For example, a first date is important for making a good impression, as is a presentation

at a meeting, or a job interview.

The actor's uncertainty about the appropriate or effective behaviors can have an impact on the amount of social anxiety one feels. Generally, people feel more anxious in unfamiliar situations when they are unaware of the norms for behavior. Social anxiety also depends on the actor's perceived lack of ability relevant to the particular self presentation performance domain. If a person doubts his or her ability, expects to perform poorly, or has low self-esteem, social anxiety is increased. Finally, the actor's chronic concern about interpersonal evaluation will have an effect on the amount of social anxiety one feels in general. There are personality traits that are related to increased social anxiety, such as public self-consciousness (Feningstein, Scheier, & Buss, 1975). Public self-consciousness also reflects an increased concern with self presentation and responsiveness to negative evaluations from others. High need for approval (Crowne & Marlowe, 1964) and high fear of negative evaluation (Leary, 1983; Watson & Friend, 1969) have also been found to be related to social anxiety.

Study 3 will address some of the situational variables discussed by Schlenker and Leary (1985). Specifically, the significance of audience to the actor will be manipulated by describing the companion as more or less popular than the subject or more or less expert than the subject. In

addition, subjects' degree of dispositional social anxiety (SA) and public self-consciousness (PSC) will be assessed via the Feningstein, Scheier and Buss (1975) Self-Consciousness scale and the Fear of Negative Evaluation (FNE) Scale (Leary, 1983).

Self-Esteem

Baumeister, Tice, and Hutton (1989) proposed a theory about the interpersonal and motivational aspects of self-esteem. They were concerned that researchers may be limited in the hypotheses that they can make about social behavior if they continue to deal with self-esteem in a purely intrapsychic way. They propose that when subjects respond to a self-esteem scale, they are reflecting a general pattern or style of self presentation. They claim that the benefit of this way of thinking about self-esteem is that it expands the capacity of self-esteem theory to make general predictions about behavior.

For example, Baumeister et al. postulate that individuals who score high on a self-esteem scale are reflecting a tendency to present themselves in a self-enhancing fashion. They characterize this self-enhancing behavioral style as one in which the person is more willing to accept risks, to focus on his or her good qualities, to call attention to oneself, and to use strategic ploys in self presentation. In contrast, the person who scores low on a self-esteem scale is not actually derogating himself or

herself, but by avoiding strong, self-enhancing claims, is protecting himself or herself. The motivation here is to minimize the threat of future embarrassing or humiliating circumstances. The self-protective style is defined as being less willing to take risks, focusing on bad qualities and having a tendency to avoid strategic ploys and drawing attention to oneself.

So, in their theory of self-esteem and self presentation, Baumeister, Tice & Hutton (1989) make a distinction between protection and enhancement motivations. They treat protective and self-enhancing self presentation as opposites because self-esteem scales compel the individual to choose between them. They claim that the self-protective motive is used most by individuals with low self-esteem while the self-enhancement motive is utilized by those with high self-esteem.

Tetlock and Manstead (1985) also make the distinction between two kinds of self presentation needs. The first of these needs is defensive impression management in which the individual is motivated to protect an established social image. This type of impression management is triggered by negative affective states like embarrassment or shame and is activated by threats to one's perceived social image. The second impression management need, assertive impression management, is used to improve an individual's social image and is triggered by self-enhancing motives. According to

Tetlock and Manstead, it is activated by perceived opportunities for creating favorable impressions on others.

Arkin (1981) also noted similar self presentation motives. He discusses an acquisitive motive (the need to acquire social approval) as well as a protective motive (the desire to avoid disapproval and losses in approval). Wolfe, Lennox and Cutler (1986) developed scales to measure these two styles of self presentation, the Concern for Appropriateness Scale (CONAP) and the Revised Self-Monitoring Scale (SM). These scales allow researchers to identify individuals who tend to rely on either of the two styles of self presentation. The Concern for Appropriateness Scale, which is supposed to measure use of the Protective style, contains two subscales, Protective Variability (ProtVar) and Protective Social Comparison (ProtSC). The Revised Self-Monitoring Scale, used to measure use of the Acquisitive style, also contains two subscales, Ability to Modify Self Presentation (AMSP) and Sensitivity to the Expressive Behavior of Others (SensOth).

Measuring Defensiveness

As Nisbett and Ross (1980) pointed out, there is a certain amount of difficulty involved in invoking motivational explanations for behavior. For every motivational explanation of a phenomenon, there is a non-motivational counterargument. It is possible that long response times to self-directed humor are due to a self-

protecting, defensive motive. Although it may not be possible to rule out the alternative cognitive explanations, it may be possible to demonstrate that the tendency toward long reaction times in the "humor" paradigm is related to the chronic use of a defensive style.

Therefore, it may be revealing to utilize measures of motivational bias, and to compare the responses of defensive and non-defensive subjects in the present paradigm. The Balanced Index of Desirable Responding (Paulhus, 1990) is a social desirability scale that correlates .71 with the Marlowe-Crowne Social Desirability Scale. For the purpose of these studies, the subscales are of more interest. The BIDR contains two subscales: Self-Deceptive Enhancement (SDE) and Impression Management (IM). Self-Deceptive Enhancement reflects the tendency to give self-reports that are overly positive, in Paulhus' words, it is an index of "exaggerated cognitive confidence" (Paulhus, 1990, p. 17). High scores have been associated with objective measures of distortion, such as hindsight bias and overconfidence in memory judgments (Paulhus & Reid, 1991). SDE scores have been found to be positively correlated with self-esteem and negatively correlated with social anxiety (Paulhus, 1990). Subjects who score high on the Impression Management subscale attempt to impress others with their socially desirable qualities. IM is affected by public/private manipulations, while SDE is not. This is because SDE is self-deceptive, while IM is

other-deceptive.

Paulhus (1989) has developed another method for tapping a subject's tendency to use intrapsychic defensive processes. He calls this the Index of Motivational Bias. The IMB is a questionnaire that asks subjects to rate themselves on twenty personality traits, 10 per page, on two pages. The first 10 traits are introduced as leading to positive life outcomes, while the second 10 are introduced as leading to negative outcomes. The subject does not know that the traits are actually groups of synonyms. Any increase in score from the negative to the positive adjectives, according to Paulhus (1989), is due to a motivational bias.

Another method of assessing an individual's tendency to be defensive is to use a Social Desirability Scale combined with the use of a self-esteem measure. According to Brown (1986), it is possible to distinguish subjects who are "genuinely" high in self-esteem from those who have "defensive" high self-esteem. Subjects who score high on a self esteem score but low on the SD scale have "genuine" high self-esteem, while subjects who score high on both have "defensive" high self-esteem. See the appendices for copies of all personality scales used here.

"Predicaments" and Self Presentation

The stimulus situations used in these studies could be seen as those in which a person's self-esteem is at risk. In his book, Impression Management, Schlenker (1980) devotes a chapter to what he calls "predicaments". Webster's New World Dictionary defines a predicament as "a condition or situation, especially one that is dangerous, unpleasant, embarrassing, or, sometimes, comical." Schlenker defines predicaments as "situations in which events have undesirable implications for the identity-relevant images actors have claimed or desire to claim in front of real or imagined audiences" (1980, p. 125). Predicaments are situations in which impression management, the vehicle for self-esteem maintenance, is most necessary. Therefore, in these studies it is assumed that the predicaments will arouse self presentational motives in the subjects.

With regard to the present paradigm, Baumeister and his colleagues (1989), would predict that once a person has presented a self-image that is positive, humiliating circumstances that arise can have serious implications for maintaining that image. For example, once a subject in an experiment has portrayed himself (on a personality scale) as masculine or socially competent, then predicaments that come up in the course of the experiment, even hypothetical ones, can be hard to take. Therefore, this would lead to longer response times, as the subject tries to work through this

self presentational predicament.

As pointed out, for the purpose of this research, one could think of the self-directed humorous or embarrassing situations as "predicaments." It should be noted that Schlenker and Leary (1982) propose that people can experience social anxiety while imagining social situations as well as when they are actually in them. This research will use subjects' immediate reactions to imagined predicaments to explore this proposal. Increased social anxiety should increase response times.

The Present Research

A major focus of this research is the use of more than one methodology, as well as multiple dependent measures. In Study 1, a questionnaire approach will be used. One advantage of such an approach is its open-ended nature. Specifically, subjects will provide their own humorous or embarrassing situations along with their own responses to the situations. This will allow a qualitative examination of individuals' views of humor and embarrassment. Subjects will also provide quantitative data on the amount of threat that they would expect to experience in the hypothetical situations that they provide.

In addition to the same threat measure used in Study 1, subjects in Studies 2 and 3 will also provide response time data as they react to the same hypothetical social predicaments used in earlier work (c.f. Neyhart, 1990).

A subtle behavioral measure was devised based on subjects' responses in past studies. It was noticed that subjects often would "turn the tables" on the experimenter by changing a self-directed situation to an other-directed one. In this research, such instances will be recorded and an analysis will be done to explore whether certain individuals rather than others demonstrate this sort of response. The basis of this behavior will also be explored. It is hypothesized that number of reversals will be related to measures of motivational bias.

One important difference between the present research and past work (e.g., Neyhart, 1990) is that the previous work used both self-directed and friend-directed stimulus situations. Because the focus of the present research is on the effect of threat on the individual who is the target of the humorous or embarrassing situation, only the self-directed situations will be used. It will be interesting to note any differences in response time between men and women as well as individuals who claim different personality traits (e.g., high vs. low public self-consciousness, high vs. low self-esteem) for situations in which degree of threat and gender of companion are varied.

Another purpose of this research is to investigate how scores on personality measures (such as public self-consciousness and self esteem) and situational manipulations (embarrassment versus humor, various degrees of threat)

influence subjects' response times and the amount of threat that they report in the "humor" paradigm. The strength of this paradigm, as mentioned, is that subjects are not aware of the true purpose of the study.

Will subjects who are less dispositionally adept in social situations handle the predicaments differently than subjects who are more socially adept? There are two possibilities. From a purely dispositional point of view, one might expect subjects who are socially anxious or publicly self-conscious to take a long time thinking of endings for potentially embarrassing situations, whereas subjects who are more socially confident would have little difficulty (i.e., take less time). According to the self presentational viewpoint (Baumeister, 1982; Baumeister, et al., 1989), on the other hand, we might expect subjects who have presented themselves as socially adept to produce long reaction times to embarrassing situations. This is because these subjects have taken a risk in presenting themselves positively. Once they have claimed that positive image, it is necessary to maintain it. Because the situation demands that the subject place himself or herself in an embarrassing predicament, it might take more effort (i.e., time) to think of an ending that maintains the positive image these subjects desire.

In addition, the threat measure is included in order to compare subjects' responses to the threat measure and the

response time measure. It is possible that only one variable, rather than both, could be affected by the manipulations.

Is Humor Threatening to Everyone?

The short reaction times of the women in the self-directed situations (Neyhart 1985, 1988, 1990) could be indicative of their failure to see the humorous situations as threatening to their self-image. In earlier studies using this paradigm (Neyhart, 1985, 1988, 1990), reaction time to complete a "humorous" situation was used as the dependent measure. The findings seemed to indicate a certain "defensiveness" on the part of the male subjects. They seemed hesitant to place themselves in the humorous self-directed situations. Was this because the men were fearful of losing face? If this is the case, situations that are explicitly billed as "embarrassing" should be more difficult for men to complete than for women. In addition, men should have a more difficult time completing the situations when in the presence of a man than a woman, especially if the situation is a masculine activity (possibly in the bowling and tennis situations).

Data Analyses

Data will be analyzed in several ways. First, a factor analysis of the scales used in these studies will be conducted on all of the data (total n = 239). The purpose of this factor analysis will be to determine whether meaningful

factors emerge (i.e., socially competent, socially anxious), as expected. If they do, then analyses will be simplified. Factor scores will be derived and used as covariates in a multivariate analysis of covariance (rather than scores on each individual personality scale). In Studies 2 and 3, multivariate analyses of variance using response time, threat, and reversals as dependent variables and the experimental conditions as independent variables will be conducted with and without the personality factors as covariates. This will allow for the examination of the effect of personality and conditions on all three measures. In addition, a stepdown ANOVA approach will be taken to determine whether significant effects will still be obtained for response time when personality, threat, and reversals are taken into account.

Analyses of variance and regression analyses will be conducted using the individual personality measures. The purpose of these analyses will be to add to what is known about the construct validity of the personality measures used in this research. This should benefit other researchers interested in the usefulness of the newer scales in particular (i.e, the Balanced Index of Desirable Responding, the PRS, and the Index of Motivational Bias).

II. STUDY 1: QUESTIONNAIRE STUDY

One of the most common research methodologies in social psychology is the questionnaire, or more specifically, the "ubiquitous rating scale" (Dawes & Smith, 1985). To explore the question of whether there are differences in the way that men and women perceive and react to humorous situations versus embarrassing situations, a questionnaire was given to a sample of college students. Half of the sample received a questionnaire asking questions about their emotional and behavioral responses to self-directed humorous situations, while the other half received a questionnaire which asked them to give information regarding their response to self-directed embarrassing situations.

It was expected that men would respond similarly to questions about humor or embarrassment. In addition, males were expected to report feeling more threatened when they were with a male friend than a female friend in both humorous and embarrassing situations. Such a finding would provide evidence in support of the notion that the men in the previous studies perceived the "humorous" situations as "embarrassing". This would also help to explain males' long response times to self-directed situations in the earlier studies. Women, on the other hand, should show a tendency to be more threatened by situations explicitly defined as embarrassing than situations labeled as humorous. In addition, women should view the humorous situations as

significantly less threatening than the men do. This would indicate that women viewed the humorous situations in the Neyhart (1985; 1990) studies as relatively unthreatening.

With regard to the other personality measures, socially anxious subjects or subjects who are high in public self-consciousness should report feeling more anxiety in the situations that they make up than other subjects do.

Method

Subjects. Subjects were eighty undergraduates (40 males and 40 females) from the university subject pool. They were given course credit for their participation. Three of the subjects were dropped from the analysis for failing to complete the full questionnaire. Therefore, the final sample consisted of 77 subjects (40 males and 37 females).

Materials. The questionnaire asked subjects to provide their own embarrassing or humorous situations that could happen to a member of their gender when they are with a same or opposite sex companion. Then the subjects were asked to put themselves in the place of the person to whom the event is occurring and to answer a number of questions about their response to the situation.

To assess subjects' emotional response to the situations, they completed the Present Reactions Scale (Nishikawa, Stevens, Bryan & Mayer, 1990). The scale was originally designed to explore domains of present mood experience, but it was utilized here to clarify and quantify

subjects' reactions to the humorous and embarrassing situations that they imagined. Subjects were asked to respond to the items according to how they would feel or react in the situation. There are four domains of mood experience represented in the scale: emotional experience, plans of action, empathy, and emotion-management. Because it does not seem relevant, the empathy domain was not included. From the items on the scale that seemed to represent a "threat" response (e.g. "avoid thinking of it", "run away", "trembling"), a threat index was computed. The items that comprised the threat index are presented in Table 1.

Table 1

Items from the Present Reactions Scale which comprise the Threat Index

EMOTION-MANAGEMENT RELATED EXPERIENCE

pretend
pretend okay
act as if no problem
disguise hurt
avoid thinking of it
ignore it
think of something else
imagine better

PLANS OF ACTION

run away
escape
hide
lay low
stay out of sight
pull back
get away quickly
run off

EMOTION-RELATED EXPERIENCE

sweating
trembling
fearful
nervous
scared
afraid
endangered
threatened
intimidated

Before filling out the PRS, subjects were asked to rate, on a scale from 0 (not at all upset) to 5 (very upset) how upset they would be in the situation that they created. In addition, subjects were asked in an open-ended manner to

explain how they would react in the humorous (or embarrassing) situation. The purpose of the open-ended question was to assess whether some subjects show a tendency to offer excuses or accounts with respect to the situations. Subjects receiving the embarrassing situation questionnaire were asked how humorous the embarrassing situations would be. The subjects receiving the humorous situation questionnaire were asked how embarrassing the humorous situations would be. Finally, subjects were asked to choose the person that they would most and least like to be with when something embarrassing (or humorous) happens to them, and to explain why they chose this person.

Personality Scales. Several personality scales were used. These were: the Index of Motivational Bias (Paulhus, 1989); the Balanced Index of Desirable Responding (Paulhus, 1990), which consists of two subscales which measure Impression Management and Self-Deceptive Enhancement; the short form of the Texas Social Behavior Inventory (Helmreich & Stapp, 1974), which is a measure of self-esteem; the Self-Consciousness Scale (Fenigstein, Scheier & Buss, 1975), which contains subscales measuring social anxiety, public and private self-consciousness; the Bem Sex Role Inventory[1] (Bem, 1974); the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984), which is a measure of the tendency to use acqusitive self-presentation; the Concern for Appropriateness Scale (Wolfe, Lennox & Cutler, 1986)

containing subscales that measure protective social comparison and protective variability; and the Brief Version of the Fear of Negative Evaluation Scale (Leary, 1983). Text of the personality scales used can be found in the appendices. Reliabilities for all scales are shown in Table 2.

Table 2

Means, Standard Deviations, and Reliability Coefficients for all scales used in Study 1

	M	SD	alpha
Texas Social Behavior Inventory (Self-Esteem)	42.76	10.69	.88
Protective Variability (Subscale of Concern for Appropriateness scale)	18.97	6.48	.86
Protective Social Comparison (Subscale of Concern for Appropriateness scale)	32.95	11.17	.90
Ability to Modify Self-Presentation (Subscale of Revised Self-Monitoring Scale)	20.78	5.34	.80
Sensitivity to the Expressive Behavior of Others (Subscale of Revised Self-Monitoring Scale)	20.14	4.91	.82
Private Self-Consciousness (Feningstein, Scheier & Buss)	24.6	6.17	.73
Public Self-Consciousness (Feningstein, Scheier & Buss)	19.01	5.67	.86
Social Anxiety (Feningstein, Scheier & Buss)	11.91	5.30	.77
Self-Deceptive Enhancement (Subscale of Paulhus' Balanced Index of Desirable Responding)	82.0	14.48	.75
Impression Management (Subscale of Paulhus' Balanced Index of Desirable Responding)	72.31	18.72	.81
Socially Desirable Responding (Paulhus' Balanced Index of Desirable Responding)	154.31	26.45	.82
Fear of Negative Evaluation (Leary)	39.23	10.82	.91
Revised Self-Monitoring (Wolfe, Lennox & Cutler)	40.92	8.89	.85

Table 2, continued

	M	SD	alpha
Threat (Present Reactions Scale)	54.64	19.06	.92
Emotion-Related Experience (Subscale of PRS)	17.78	7.94	.86
Emotion Management (Subscale of PRS)	20.92	7.06	.78
Plans of Action (Subscale of PRS)	15.94	7.92	.89

Design and Procedure. Study 1 employed a 2 (gender of subject) X 2 (type of situation: humorous or embarrassing) X 2 (gender of companion) factorial design. It should be noted that the measures in Study 1 were completed by the subjects in large groups (average group size was about 20) using pencil and paper.

Results

Qualitative Analysis. Table 3 presents a summary of the kinds of situations that subjects provided for humorous and embarrassing situations. It is interesting to note that subjects never found sexual situations to be humorous. When subjects brought up sexual situations, it was always in the embarrassing condition. Physical sorts of incidents ("trip

and fall", "spill a drink") were more often humorous than embarrassing. Females brought up bodily functions ("passing gas," "getting her period") more than males did, and these were usually embarrassing. Social discomfort and social faux pas ("forgetting ones wallet", "having bad breath", "having food on teeth") were more often embarrassing than humorous, for both males and females. Females never brought up a situation in which their ego would be damaged. Males did, and most often it was humorous (see Table 4).

Table 3

Summary of Categories for Humorous and Embarrassing Situations Provided By Subjects in Study 1

Category	Examples
Sexual	
Inadequacy	"Not being experienced"
Being watched	"Being caught masturbating"
Other sexual situations	"Condom breaks"
Social Faux Pas	"Forgetting a birthday" "Say something stupid" "Forgetting your wallet on a date"
Social Discomfort	"Finding out a friend is gay" "Meeting up with an old girlfriend" "Overhearing something personal"
Blow to ego	"Telling everyone how good you are at something,then messing up" "Getting shot down when trying to pick up someone"
Exposure	"Fly is open" "Clothes ripping"
Bodily Functions	"Farting" "Having to go to the bathroom while riding in the car" "Getting her period"
Physical	"Trip and fall" "Spilling a drink"
Other	"Practical jokes"

Table 4

Summary of Humorous and Embarrassing Situations Provided by Subjects in Study 1

	Humorous		Embarrassing	
	Males	Females	Males	Females
Sexual	0	0	4	3
Social Faux Pas	1	2	2	5
Social Discomfort	0	2	7	5
Blow to Ego	5	0	1	0
Exposure	2	1	5	1
Bodily Functions	0	1	1	5
Physical	7	9	1	1
Other	3	0	0	0

As can be seen in Table 5, the most popular single response to the humorous or embarrassing situations was to laugh or make a joke. Females were more likely than males to report that they would laugh or make a joke in the embarrassing situation [$X2$ (1) = 5.54, $p < .02$], while males were more likely to say that they would do something else ("pull up my zipper"; "explain"; "ignore it").

Table 5

Qualitative Analysis of Responses to Humorous and Embarrassing Situations

	Females		Males	
	Humorous	Embarrassing	Humorous	Embarrassing
Laugh	8	5	4	2
Joke	3	4	3	5
Laugh it off	3	3	3	0
Apologize	2	1	0	2
Become angry/ violent	1	0	2	1
Make fun of self	0	1	2	0
Get revenge	0	0	1	2
Ignore it	6	0	1	5
Repair situation	0	1	3	3
Explain	1	0	0	2
Be calm	1	1	1	2
Turn red	0	1	0	0
Depends	0	1	2	0
Learn from it	0	0	0	1
Be embarrassed	1	0	0	0
Other	0	2	0	2

Table 6 summarizes subjects' responses to the question that asked who they would most like to be with in the humorous or embarrassing situation that they made up. Subjects most often named close friends or family as the preferred companion when they were embarrassed in some way.

Table 6

Summary of Responses to the "Who would you prefer to be with?" question

	Females		Males	
	Humorous	Embarrassing	Humorous	Embarrassing
Close Friend	4	3	1	7
Male Friend	2	0	2	0
Female Friend	3	2	1	2
Roommate	1	2	1	0
Best Friend	2	4	3	3
Boyfriend/ Girlfriend	3	1	4	6
Friends	2	0	1	1
Sister	1	2	1	0
Mother	0	2	0	0
Father	0	1	0	0
Someone with a good sense of humor	0	0	2	0
Brother	0	0	0	1

Factor Analysis. In order to clarify the concepts being measured by the scales used in these studies, a Principal

Axis Factor Analysis followed by varimax rotation was conducted using the data for all subjects (total n = 239) in the three studies reported here. Self Esteem, Protective Variability, Protective Social Comparison, Ability to Modify Self Presentation, Sensitivity to the Expressive Behavior of Others, Private Self-Consciousness, Public Self-Consciousness, Social Anxiety, Fear of Negative Evaluation, Self Deceptive Enhancement, Impression Management, and the Index of Motivational Bias were entered. Three factors emerged. Self Esteem (negative factor loading), Protective Variability, Protective Social Comparison, Public and Private Self-Consciousness, Social Anxiety, Self-Deceptive Enhancement, and Fear of Negative Evaluation loaded on Factor 1. This factor could be thought of as measuring "Social Anxiety". Factor 2 contained Self Esteem (positive factor loading), Ability to Modify Self Presentation, and Sensitivity to the Expressive Behavior of Others. This factor could be thought of as the "Social Competence" factor. Factor 3 contained Impression Management and the Index of Motivational Bias, and represents the "Impression Management" factor. Loadings of each scale on factors, communalities, and percents of variance are shown in Table 11. Because the factors fit conceptually with the hypotheses of these studies, standardized factor scores will be computed (using an unweighted linear composite) for all subjects, and the three factors will be used in the main

Table 7

Factor Loadings, Communalities and Percents of Variance for Principal Axis Factor Extraction and Varimax Rotation for Personality Scales Used In All Studies

Scale	1	2	3	h2
Self Esteem	-.65	.56	.11	.75
Protective Variability	.50	.08	.35	.39
Protective Social Comparison	.62	.26	.25	.52
Ability to Modify Self Presentation	-.04	.60	.21	.40
Sensitivity to the Expressive Behavior of Others	.15	.60	.03	.39
Private Self-Consciousness	.40	.26	.02	.23
Public Self-Consciousness	.74	.23	.03	.61
Social Anxiety	.72	-.24	-.22	.62
Self Deceptive Enhancement	-.67	.26	-.20	.56
Impression Management	-.19	-.06	-.70	.54
Index of Motivational Bias	-.17	.18	.34	.18
Fear of Negative Evaluation	.82	.06	-.06	.67
Percent of Variance	29.4	13.8	5.6	

Factor Labels
1 Social Anxiety
2 Social Competence
3 Impression Management

Table 8

Reliabilities for Factors 1, 2, and 3 for Studies 1, 2, and 3

	STUDY		
	1	2	3
FACTOR 1 (Social Anxiety)	.51	.29	.26
FACTOR 2 (Social Competence)	.67	.62	.43
FACTOR 3 (Impression Management)	-1.09	.02	-.74

Table 9

Pearson Correlations Between Personality Factors and Dependent Variables for Study 1

	Social Anxiety	Social Competence	IM
UPSET	.30**	.11	.11
PRS THREAT	.38***	.18	-.15
ERE	.40***	.24*	-.12
PA	.30**	.03	-.07
EM	.22	.18	-.19

IM = Impression Management

UPSET = "How Upset Would You Be?"

ERE = Emotion Related Experience Subscale of PRS

PA = Plans of Action Subscale of PRS

EM = Emotion Management Subscale of PRS

analyses reported for all studies. Reliabilities for the three factors are shown in Table 8.

Correlations. Correlations between the Personality Factors and the dependent measures are presented in Table 9. Factor 1, Social Anxiety, was positively correlated with Upset, Threat, and two of the three PRS subscales (Emotion Related Experience and Plans of Action). In other words, the more socially anxious a subject was, the more upset and threatened he or she was reported to be in the situations. Social Competence, Factor 2, was positively correlated with ERE.

Multivariate Analysis of Variance. A 2 x 2 x 2 multivariate analysis of variance was conducted using PRS Threat and the "How upset would you be?" question as dependent variables. Effects of condition, companion gender, gender, and their interactions were assessed by univariate analysis as well as stepdown analysis. PRS Threat was given highest priority in the stepdown analysis, followed by "Upset". The purpose of this order of variables was to assess whether any effect would remain for the direct "upset" question once the effects for emotion were removed. Results of these analyses are summarized in Table 10.

Using Wilks' criterion, multivariate tests of significance revealed that the combined DVs (PRS Threat and Upset) were significantly related to condition [F (2,68) = 7.57, $p < .001$].

Univariate tests indicated that there was a significant effect for condition for upset, but not for threat. The stepdown analysis indicated that even when controlling for the effect of threat (emotion), the effect for upset remained significant (see Table 10).

Table 10

Tests of Condition (Humorous or Embarrassing), Companion Gender, Subject Gender and their Interactions for Study 1

IV	DV	Univariate *F*	df	Stepdown *F*	df	alpha
Gender	Threat	.028	1,69	.028	1,69	.865
	Upset	.022	1,69	.048	1,68	.827
Condition	Threat	2.16	1,69	2.16	1,69	.146
	Upset	15.36***	1,69	12.62	1,68	.001
Companion Gender	Threat	.379	1,69	.379	1,69	.540
	Upset	.786	1,69	.504	1,68	.480
Gender x Condition	Threat	.039	1,69	.039	1,69	.842
	Upset	.017	1,69	.004	1,68	.946
Gender x Companion Gender	Threat	.984	1,69	.984	1,69	.325
	Upset	.324	1,69	.055	1,68	.814
Condition x Companion Gender	Threat	.265	1,69	.265	1,69	.608
	Upset	.009	1,69	.084	1,68	.772
Gender x Condition x Companion Gender	Threat	.069	1,69	.069	1,69	.793
	Upset	.048	1,69	.018	1,68	.891

* = $p < .05$
** = $p < .01$
*** = $p < .001$

Multivariate Analysis of Covariance. A 2 (gender of subject) by 2 (gender of imagined companion) by 2 (condition: humorous or embarrassing) between-subjects analysis of covariance was performed on the same two dependent variables, PRS Threat and Upset. Adjustment was made for three covariates: Social Anxiety (Factor 1 from Factor Analysis), Social Competence (Factor 2 from Factor Analysis) and Impression Management (Factor 3 from Factor Analysis). Effects of condition, companion gender, gender, and their interactions were assessed after adjusting for the covariates by univariate analysis as well as stepdown analysis. PRS Threat was given highest priority in the stepdown analysis, followed by the "How upset would you be?" question. As in the MANOVA, the reason for this order was so that the effects for the upset question could be assessed after controlling for threat and the covariates. Results of these analyses are summarized in Table 11.

Multivariate tests of significance revealed that the combined DVs were significantly related to the combined covariates, using Wilk's criterion, $F = 4.61$, $p < .001$. There was also a significant multivariate effect for condition [F (2,62) = 7.47, $p < .001$].
Univariate tests revealed that the covariates were related to both the DVs. The stepdown analysis indicated that once the effect for threat was controlled, the covariates were no longer related to the upset variable (see Table 11).

When controlling for the covariates, there was a significant subject gender by companion gender univariate effect for PRS Threat [F (1,63) = 4.56, p < .04] such that males reported more threat in the presence of a female companion while females reported more threat when they were with a male.

There were also significant univariate effects for condition for both threat and upset (see Table 11). Subjects reported that they would be both more threatened and upset in the embarrassing condition than in the humorous condition. The stepdown analysis revealed that even when controlling for the covariates and threat, the condition effect remained for the upset question.

Table 11

Tests of Condition (Humorous or Embarrassing), Companion Gender, Subject Gender and their Interactions With Personality Factors 1, 2, and 3 as Covariates for Study 1

IV	DV	Univariate F	df	Stepdown F	df	alpha
Covariates	Threat	7.77***	3,63	7.77	3,63	.000
	Upset	1.53	3,63	1.90	3,62	.138
Gender	Threat	.04	1,63	.04	1,63	.839
	Upset	.02	1,63	.01	1,62	.932
Condition	Threat	4.19*	1,63	4.19	1,63	.045
	Upset	13.82**	1,63	13.82	1,62	.002
Companion Gender	Threat	1.53	1,63	1.53	1,63	.219
	Upset	.65	1,63	.26	1,62	.612
Gender x Condition	Threat	.29	1,63	.29	1,63	.589
	Upset	.11	1,63	.04	1,62	.843
Gender x Companion Gender	Threat	4.56*	1,63	4.56	1,63	.037
	Upset	.56	1,63	.05	1,62	.826
Condition x Companion Gender	Threat	.093	1,63	.093	1,63	.761
	Upset	.068	1,63	.036	1,62	.849
Gender x Condition x Companion Gender	Threat	.379	1,63	.379	1,63	.540
	Upset	.100	1,63	.028	1,62	.867

* = $p < .05$
** = $p < .01$
*** = $p < .001$

Other Analyses

Analyses of Variance. As indicated by the MANOVA results presented, there were no significant main or interaction effects for the total PRS Threat measure.

However, when only the emotion-related experience subscale of the PRS was used as the dependent variable in a 2 (gender of subject) X 2 (gender of companion) X (condition) 2 ANOVA, there was a trend toward a significant main effect for condition [F (1,76) = 3.84, p < .055] such that subjects reported feeling more emotion (sweating, nervous, trembling) in the embarrassing condition than in the humorous condition (19.44 vs. 15.89). There were no significant effects when the plans of action subscale or the emotion-management subscale were used as dependent variables.

For the question "How humorous was the (embarrassing) situation?", there was a significant main effect for companion gender [F (1,40) = 11.514, p < .036] such that subjects thought an embarrassing situation was much more humorous in the presence of a female companion than in the presence of a male companion (3.15 vs. 2.10). There were no significant effects for the "How embarrassing was the (humorous) situation?" question.

ANOVAS for Personality Variables. To address the question of the construct validity of the individual scales used, separate analyses were conducted for the personality scales. Subjects were divided into groups of high, middle, and low on the personality scales. For the PRS threat measure, an analysis of variance showed that subjects who scored high as opposed to low on concern for appropriateness and self-monitoring reported that they would feel more

threat in the situations. In addition, subjects who scored high on the Self-Deceptive Enhancement scale reported that they would feel significantly less threatened than subjects who scored low (see Table 12).

Table 12

Means and Standard Deviations for the PRS Threat Measure in Study 1

Personality Measure	High	Middle	Third Low
Concern for Appropriateness**	M=63.19 SD=19.52 n=26	M=51.76 SD=16.55 n=25	M=48.85 SD=18.48 n=26
Self-Monitoring*	M=58.00 SD=20.43 n=24	M=59.2 SD=17.8 n=30	M=45.17 SD=16.34 n=26
Self-Deceptive Enhancement*	M=47.83 SD=16.72 n=23	M=54.36 SD=19.24 n=28	M=60.96 SD=19.36 n=26

* = $p < .05$, ** = $p < .01$

There was a significant two-way interaction between motivational bias and companion gender [F (1,44) = 6.59, $p < .016$] such that subjects who scored high on the IMB reported more threat when they were with a male companion, while subjects who scored low reported more threat when they were with a female companion (see Table 13).

Table 13

Interaction Between Motivational Bias (IMB) and Companion Gender on the PRS Threat Measure in Study 1

	Companion Gender	
	Male	Female
Level of IMB		
High IMB	M=61.20 SD=18.4 n=10	M=43.38 SD=11.81 n=13
Low IMB	M=50.21 SD=16.21 n=14	M=57.00 SD=19.76 n=8

For the "How upset would you be?" question, subjects were divided into high and low groups only. Subjects who scored high on fear of negative evaluation [F (1,51) =6.46, $p < .01$] and public self-consciousness [F (1,41) = 4.27, $p < .045$] reported that they would be significantly more upset than subjects who scored low on those measures. In addition, subjects who scored high on the Index of Motivational Bias [F (1,44) = 5.92, $p < .02$] reported that they would be significantly less upset than subjects who scored low (see Table 14).

Table 14

Means and Standard Deviations for the "How upset would you be?" question in Study 1

Personality Measure	Level	
	High	Low
Fear of Negative Evaluation**	M= 2.96 SD=1.34 n=26	M=2.00 SD=1.38 n=26
Public Self-Consciousness*	M=3.05 SD=1.32 n=21	M=2.19 SD=1.36 n=21
Motivational Bias*	M=1.82 SD=1.43 n=23	M=2.77 SD=1.15 n=22

* = $p < .05$, ** = $p < .01$

Discussion

Study 1 did not provide strong evidence for the kinds of gender differences anticipated. It is possible that this is due to lack of involvement or experimental realism (Aronson, Ellsworth, Carlsmith, & Gonzales, 1990) which is inherent in the questionnaire method.

The qualitative analysis offered some insights into gender differences in dealing with humor versus embarrassment. The most obvious finding was that most subjects would respond by laughing or telling a joke, regardless of whether the situation was humorous or embarrassing. This result is consistent with theories of embarrassment (Silver, Sabini & Parrott, 1987) that point to wit and humor as a way of "rescuing" a bad situation. However, upon closer inspection of subjects' self-reported responses to the embarrassing situations, it is evident that males are much less likely to laugh or make a joke than females. Males would rather do something else, like repair the situation, ignore it, or explain it.

That subjects most often mentioned close friends when asked for their preferred companion in an embarrassing situation is not surprising. The theories of Silver, Sabini and Parrott (1987) and Gibbons (1990) also state that embarrassment is decreased in the presence of close friends. For the quantitative analysis, there were two gender-relevant effects. The first was the main effect for

companion gender on the question "How humorous was the embarrassing situation?" Recall that subjects thought an embarrassing situation was more humorous in the presence of a female companion than a male companion. There were no significant effects for how embarrassing the humorous situation would be. It is interesting that subjects reported that they would take the embarrassing situation more lightly when they were with a female rather than a male. This could be because females are seen as more sympathetic, or less threatening. It is also possible, given the qualitative findings discussed earlier, that since females are more likely to laugh or joke in an embarrassing situation, their companion may also feel more at ease in such a situation.

Secondly, the MANCOVA revealed a significant gender by companion gender interaction for the PRS Threat measure when controlling for personality. It is interesting that this effect is not significant when personality is not considered.

For the personality findings, several effects were as hypothesized. It makes sense that subjects who were high on concern for appropriateness (which correlates negatively with self-esteem) would feel more threatened by the situations; it is also feasible that subjects high on fear of negative evaluation and public self-consciousness would be more upset by the situations than those who were low on those traits. It is not clear why high self-monitors would

also report more threat.

The finding that subjects high on motivational bias and self-deceptive enhancement reported being less upset and threatened provides construct validity for the IMB and the SDE scales. This finding follows from past findings that high SDE subjects report lower expectations that they would be in traffic accidents and tend to show more hindsight bias than low SDE subjects (Paulhus & Reid, 1991). In addition, these findings emphasize the social desirability problem in self-report methodologies (Paulhus, 1989).

At first glance, it is surprising that there were no effects for the threat variable. The only significant effect in the MANOVA was for the direct "How upset would you be?" question, but it was a main effect for condition, rather than an interaction, as hypothesized. However, the MANCOVA illustrates that when controlling for the personality factors (especially Factor 1), two significant effects (condition and gender by companion gender) for PRS Threat emerge. As the correlations indicate, PRS Threat is strongly related to personality factors. It is evident that the personality variables are having the most effect on subjects' responses to the PRS threat measure. For the situational manipulations to have an effect, it will be necessary to make them more involving for the subjects. It

should also be noted that subjects in this study are responding to their own humorous or embarrassing situations, which vary in degree of threat (see Table 3 for examples of responses for embarrassing and humorous situations). Studies 2 and 3 will be more controlled, because they will provide consistent situations to which subjects will respond.

One limitation of Study 1 is that it is possible that subjects' own situations were not involving enough for the subjects to actually "feel" threatened by them. The only effects for the PRS were obtained through the emotion-related experience subscale, which focuses on bodily emotional experience (sweating, trembling). It is not surprising that the effect is most evident on the ERE subscale and for embarrassment, since embarrassment theorists characterize embarrassment as "a very bodily emotion" (Harre, 1990, p. 181).

III. STUDY 2: RESPONSE TIME STUDY

It is possible that due to the self-report nature of the task in Study 1, subjects could be less likely to admit to feeling threatened. In other words, subjects "have time" to be defensive. Because subjects are less likely to guess the purpose of the experiment using a response time paradigm, Studies 2 and 3 were expected to reveal these concerns. These studies manipulate degree of threat as well as gender of companion.

If longer reaction times are reflective of motivation to protect one's self image in the face of threat, then one might expect that subjects would take longer to respond to situations in which the threat is more salient. For example, the results obtained in the previous research were obtained when subjects were providing endings for "humorous" situations. It could be that the female subjects did not consider the humorous self-directed situations threatening, whereas the male subjects did. Study 1 utilized a survey research method to explore men's and women's perceptions of humor and embarrassment. Study 2 further examined this hypothesis by manipulating the type of situation subjects receive (humorous versus embarrassing) and by utilizing a response time measure (cf. Neyhart, 1985, 1988, 1990). The purpose of Study 2 was to assess whether subjects' immediate, spontaneous responses in the response time

paradigm parallel the more controlled, thoughtful responses to the questionnaire. It was expected that, in the response time paradigm, defensiveness (feelings of threat) would be manifested in the form of long response times.

Because half of the design is identical to that of past research (Neyhart, 1985, 1988, 1990), this study will provide an opportunity to replicate past findings and to better understand those findings. Along those lines, the personality inventories will be used to explore the role of the personality constructs in this paradigm. The personality measures will be used as covariates, predictors in regression analyses, and also as independent variables.

In addition, subjects' self-esteem scores will be correlated with their mean reaction times. It is expected that reaction time would be positively correlated with self-esteem. In light of Baumeister, Hutton, and Tice's (1989) theory of the motivational aspect of self-esteem, it is predicted that subjects who score high in self-esteem would take longer to place themselves in a humorous or a potentially embarrassing situation, while subjects who are low in self-esteem would take less time.

The pattern of gender differences that have emerged in my past research can be assimilated into the self-esteem predictions. Ickes and Layden (1978) looked at self-esteem and responsibility for negative events and found that high self-esteem is related to a tendency to make internal

attributions for positive events and external attributions for negative outcomes. In that study, women tended to respond like low self-esteem subjects and men like those with high self-esteem. In addition, several studies (Dweck & Reppucci, 1973; Nicholls, 1975) found that girls are more likely than boys to attribute failure to lack of ability. Therefore, one might expect women and low self-esteem individuals to have an easier time completing a situation in which they are embarrassed, whereas men and high self-esteem individuals have a harder time. In the future, correlations between masculinity and femininity and self-esteem will be examined to further explore this relation.

In these studies, subjects are asked to think of self-directed endings for the situations. In addition to taking a longer time with the task, another way that subjects could avoid placing themselves in the situations would be to make the other person the target ("My friend would drop the bowling ball on his foot," "My friend would fall down," "The waitress would drop the food"). This type of response will be called a "reversal", and analyses will be performed to see what personality types tend to use them. Finally, as a control procedure, subjects who make reversals will be dropped from the response time analysis.

The main analysis will be a multivariate analysis of covariance and a multivariate analysis of variance using PRS Threat, Response Time, and Number Reversals as DVs, and

experimental conditions as IVs. In the ANCOVA, it will be possible to examine the effect of the personality factors formed by the factor analysis on effects for each DV on the conditions.

Method

Subjects. Eighty one undergraduate psychology students (40 males and 41 females) participated in the study in partial fulfilment of their psychology course requirement.

Personality Measures. Several personality scales were used. These are: the Index of Motivational Bias (Paulhus, 1989); the Balanced Index of Desirable Responding (Paulhus, 1990); the Texas Social Behavior Inventory (Helmreich & Stapp, 1974), which is a measure of self-esteem, the Self-Consciousness Scale (Fenigstein, Scheier & Buss, 1975), which contains subscales measuring social anxiety, public and private self-consciousness; the Bem Sex Role Inventory (Bem, 1974); the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984); the Concern for Appropriateness Scale (Wolfe, Lennox & Cutler, 1986); and the Brief Version of the Fear of Negative Evaluation Scale (Leary, 1983). Reliabilities, means and standard deviations for the scales used in Study 2 are shown in Table 15.

Table 15

Means, Standard Deviations, and Reliability Coefficients for all scales used in Study 2

	M	SD	alpha
Texas Social Behavior Inventory (Self-Esteem)	42.32	9.28	.86
Protective Variability (Subscale of Concern for Appropriateness scale)	19.85	6.72	.88
Protective Social Comparison (Subscale of Concern for Appropriateness scale)	32.17	9.70	.86
Ability to Modify Self Presentation (Subscale of Revised Self-Monitoring Scale)	20.5	4.94	.82
Sensitivity to the Expressive Behavior of Others (Subscale of Revised Self-Monitoring Scale)	19.31	4.71	.82
Private Self-Consciousness (Feningstein, Scheier & Buss)	23.89	5.96	.72
Public Self-Consciousness (Feningstein, Scheier & Buss)	17.34	5.92	.85
Social Anxiety (Feningstein, Scheier & Buss)	12.16	5.26	.77
Self-Deceptive Enhancement (Subscale of Paulhus' Balanced Index of Desirable Responding)	82.65	12.12	.69
Impression Management (Subscale of Paulhus' Balanced Index of Desirable Responding)	71.38	17.77	.83
Socially Desirable Responding (Paulhus' Balanced Index of Desirable Responding)	154.02	24.11	.82
Fear of Negative Evaluation (Leary)	36.81	8.78	.86

Table 15, continued

	M	SD	alpha
Revised Self-Monitoring (Wolfe, Lennox & Cutler)	39.80	7.90	.83
Threat (Present Reactions Scale)	64.28	15.84	.89
Emotion-Related Experience (Subscale of PRS)	21.46	6.65	.84
Emotion Management (Subscale of PRS)	23.43	5.40	.68
Plans of Action (Subscale of PRS)	19.4	7.32	.88

Design & Procedure. To parallel Study 1, the study employed a 2 (gender of subject) X 2 (type of situation: humorous or embarrassing) X 2 (gender of companion) factorial design. Subjects were seated individually in a small cubicle in front of a computer terminal, and they completed the questionnaires via computer. After responding to all of the scales, the subject was directed to the laboratory where he or she participated in the response time task.

Type of situation was manipulated by telling half of the subjects that the experiment was a study of the humor process (cf. Neyhart, 1985, 1990) and that the experimenter was interested in the kinds of things that people find humorous. The situations end with the line, "What could happen to you personally that would be humorous?" The other subjects were told that the experiment was a study of the

embarrassment process and the experimenter was interested in the kinds of things that people find embarrassing. These situations ended with the line, "What could happen to you personally that would be embarrassing?" In addition, half of the subjects were given situations involving himself or herself and a same sex friend, while the other half of the subjects received situations involving himself or herself and an opposite sex friend.

Response Time Task. Subjects were told that they would be asked to provide humorous (or embarrassing) endings for four incomplete everyday situations involving himself or herself and one of his or her friends. They were told to write down their first humorous or embarrassing thought. The experimenter informed the subjects that the situations would be presented on tape as well as typed in a booklet and that the tape would be stopped to give them time to respond before going on to the next situation.

Subjects were then presented with four incomplete everyday situations in which the subject and a friend are playing tennis, bowling, walking down the street with an umbrella, and going to the movies. The situations were tape recorded to standardize any demand characteristics due to voice inflections over experimental conditions, and were spoken in the same female voice. Subjects were given a booklet with the situations typed in it on separate pages and were instructed to follow along with the voice on the

tape and not to begin reading the situations until the voice began. The dependent variable, response times to begin completing the situations, were unobtrusively measured using a digital stopclock that was not seen by the subjects. The response time (from the time the tape was stopped to the time the subject began to write) was measured in hundredths of a second. For both studies 2 and 3, response time data was collected by a research assistant who was blind to the hypotheses of the study.

PRS Threat Measure. Following the response time task, subjects were then given the Present Response Scale (Nishikowa, Stevens, Bryan, & Mayer, 1990). They were told to imagine themselves in the four situations that they had just responded to and to use the items on the PRS to describe how they would feel in the situations as a whole.

Finally, the experimenter asked the subjects to give their impressions of the purpose of the study. Asking this question served as a check to see whether subjects knew they were being timed and to establish whether behavior was affected by anything inherent in the experimental situation of which the experimenter may not have been aware. After being told when the debriefing would take place and the purpose for its delay[2], subjects were dismissed. The entire session took between 45 and 60 minutes.

Results

Correlations. Correlations between the Personality Factors and the dependent measures are presented in Table 16. The only significant relations are between PRS Threat and Factors 1 and 2.

Table 16

Pearson Correlations Between Personality Factors and Dependent Variables for Study 2

	Social Anxiety	Social Competence	IM
LMEANRT	.01	-.13	-.13
PRS THREAT	.35**	-.23*	.09
REVERSALS	.01	-.03	-.06

IM = Impression Management

LMEANRT = Log of Mean Response Time

Multivariate Analysis of Variance. A 2 x 2 x 2 multivariate analysis of variance was conducted. Effects of condition, companion gender, gender, and their interactions were assessed by univariate analysis as well as stepdown analysis. PRS Threat was given highest priority in the stepdown analysis, followed by number of reversals and log mean response time. Again, the reason for this order was so that the effects on response time could be assessed after adjustment for threat and reversals. Results of these

analyses are summarized in Table 17.

Using Wilks' criterion, multivariate tests of significance revealed that the combined DVs (PRS Threat, reversals, and log mean response time) were significantly related to condition [F (3,71) = 3.35, p < .02].

There were three significant univariate effects. There was a significant univariate effect for companion gender on threat [F (1,73) = 4.69, p < .03], such that subjects reported more threat in the presence of a male than a female companion. For condition, there was a significant univariate effect for response time [F (1,73) = 4.84, p < .03], and for threat [F (1,73) = 4.80, p < .03]. The effect for response time remained significant after controlling for the other two DVs in the stepdown analysis [F (1,71) = 4.75, p < .03].

Table 17
Tests of Condition (Humorous or Embarrassing), Companion Gender, Subject Gender and their Interactions for Study 2

IV	DV	Univariate F	df	Stepdown F	df	alpha
Gender	Threat	.08	1,73	.08	1,73	.782
	Revs	.68	1,73	.74	1,72	.394
	LMRT	1.81	1,73	2.41	1,71	.124
Condition	Threat	4.80*	1,73	4.80	1,73	.032
	Revs	.08	1,73	.28	1,72	.598
	LMRT	4.84*	1,73	4.75	1,71	.033
Companion Gender	Threat	4.69*	1,73	4.69	1,73	.030
	Revs	.68	1,73	.30	1,72	.587
	LMRT	.15	1,73	.43	1,71	.514
Gender x Condition	Threat	.35	1,73	.35	1,73	.556
	Revs	1.19	1,73	1.04	1,72	.310
	LMRT	1.81	1,73	1.14	1,71	.289
Gender x Companion Gender	Threat	1.31	1,73	1.31	1,73	.256
	Revs	.00	1,73	.02	1,72	.882
	LMRT	2.82	1,73	3.02	1,71	.087
Condition x Companion Gender	Threat	.13	1,73	.13	1,73	.720
	Revs	.00	1,73	.00	1,72	.970
	LMRT	1.14	1,73	1.14	1,71	.280
Gender x Condition x Companion Gender	Threat	1.79	1,73	1.79	1,73	.185
	Revs	.07	1,73	.01	1,72	.924
	LMRT	.29	1,73	.44	1,71	.510

* = $p < .05$
** = $p < .01$

Revs = Reversals
LMRT = Log Mean Response Time

Multivariate Analysis of Covariance. A 2 (gender of subject) by 2 (gender of imagined companion) by 2 (condition: humorous or embarrassing) between-subjects analysis of covariance was performed on three dependent variables, PRS Threat, Number of Reversals, and Log of Mean Response Time[3]. Adjustment was made for three covariates: Social Anxiety (Factor 1 from Factor Analysis), Social Competence (Factor 2 from Factor Analysis) and Impression Management (Factor 3 from Factor Analysis).

Multivariate tests of significance revealed that the combined DVs were not significantly related to the combined covariates, condition, gender, companion gender or any of the interactions.

Effects of condition, companion gender, gender, and their interactions were assessed after adjusting for the covariates by univariate analysis as well as stepdown analysis. PRS Threat was given highest priority in the stepdown analysis, followed by number of reversals and log mean response time. The reason for this order was so that the effects on response time could be assessed after adjustment for personality covariates, threat, and reversals. Results of these analyses are summarized in Table 18.

There was a significant univariate effect for the covariates on the PRS Threat measure [F (3,70) = 3.65, p < .02], such that subjects who were socially anxious reported

more threat than other subjects. After controlling for the covariates, there was a significant univariate effect for condition on log of mean response time [F (1,70) = 3.94, p < .05] such that subjects took longer to think of endings for the situations in the embarrassing condition than the humorous condition. This effect was also significant in the stepdown analysis, when controlling for the covariates, threat, and reversals [F (1,68) = 4.07, p < .05].

As in the MANOVA, there was a significant univariate effect for companion gender on the PRS Threat measure after controlling for the convariates [F (1,70) = 4.83, p < .03], such that subjects reported more threat in the presence of a male than a female companion. There were no other significant effects.

Table 18

Tests of Condition (Humorous or Embarrassing), Companion Gender, Subject Gender and their Interactions With Personality Factors 1, 2, and 3 as Covariates for Study 2

IV	DV	Univariate F	df	Stepdown F	df	alpha
Covariates	Threat	3.65**	3,70	3.65	3,70	.016
	Revs	.49	3,70	.54	3,69	.654
	LMRT	.28	3,70	.14	3,68	.935
Gender	Threat	.02	1,70	.02	1,70	.888
	Revs	1.45	1,70	1.41	1,69	.238
	LMRT	.75	1,70	1.33	1,68	.252
Condition	Threat	3.08	1,70	3.08	1,70	.083
	Revs	.00	1,70	.08	1,69	.777
	LMRT	3.94*	1,70	4.07	1,68	.048
Companion Gender	Threat	4.83*	1,70	4.80	1,70	.031
	Revs	.98	1,70	.47	1,69	.497
	LMRT	.07	1,70	.30	1,68	.586
Gender x Condition	Threat	.07	1,70	.07	1,70	.792
	Revs	1.16	1,70	1.08	1,69	.300
	LMRT	1.75	1,70	1.14	1,68	.287
Gender x Companion Gender	Threat	1.52	1,70	1.52	1,70	.221
	Revs	.01	1,70	.01	1,69	.937
	LMRT	2.52	1,70	2.74	1,68	.102
Condition x Companion Gender	Threat	.16	1,70	.16	1,70	.691
	Revs	.02	1,70	.01	1,69	.920
	LMRT	.71	1,70	.82	1,68	.371
Gender x Condition x Companion Gender	Threat	.89	1,70	.89	1,70	.349
	Revs	.01	1,70	.00	1,69	.973
	LMRT	.47	1,70	.55	1,68	.461

* = $p < .05$
** = $p < .01$
Revs = Reversals
LMRT = Log Mean Response Time

Other Data Analyses

Reported threat. Three 2 (gender of subject) by 2 (gender of imagined companion) by 2 (condition: humorous or embarrassing) ANOVAs were performed using the subscales of the PRS threat scale as the dependent variable. The subscales are emotion-related experience, emotion management, and plans of action. For the emotion-related experience subscale, there was a main effect for condition [F (1,80) = 4.88, $p < .03$], such that subjects reported that they would feel more emotion (sweating, trembling, nervous) in the embarrassing than in the humorous condition (23.02 vs. 19.85). For the plans of action subscale, there was a main effect for gender of companion [F (1,80) = 5.07, $p < .027$] such that subjects reported feeling more need to take action (run away, escape, hide) when they were imagining a male companion than a female companion (21.15 vs. 17.68).

In order to draw a comparison between these findings and previous work (Neyhart, 1985, 1988, 1990), humorous situations only were examined. A oneway analysis of variance showed that men tended to take longer than women to respond to the situations (.53 vs. .34, F (1,38) = 2.94, $p < .09$. For embarrassing situations, men and women took an equal amount of time.

In addition, an analysis using only the conditions used in earlier studies (Neyhart, 1985; 1988) was performed. Response times for subjects in the humorous condition who

were with a same-sex partner were examined. A oneway ANOVA demonstrated that male subjects took significantly longer (.63 vs. .29) than female subjects to think of endings for the humorous situations [$F = 5.1$, $p < .04$].

There were no significant effects when the bowling and tennis situations were analyzed separately from the movies and umbrella situations.

Reversals. Interestingly, half of the subjects in this study made at least one reversal (i.e., making someone other than the self the target) in the five situations they responded to. When the subjects with reversals were removed from the analysis, there was a significant main effect for gender [F (1,40) = 7.07, $p < .01$], such that males took significantly longer than females to complete the situations (.61 vs. .30).

Only looking at subjects with reversals, an analysis of variance revealed a trend toward a main effect for condition [F (1,38) = 3.07, $p < .09$] such that subjects tended to take longer in the embarrassing condition (.68 vs. .47).

There were no significant differences between males and females in the actual number of reversals used in this study.

Regression Analysis: Response Time Measure. A hierarchical regression analysis predicting log of mean response time was conducted using log of mean response time as the predicted variable, and personality measures were

used as predictors in addition to the experimental variables. Social anxiety, protective social comparison, self-deceptive enhancement, and self-esteem were entered in the first block. The second block consisted of companion sex, condition, and subject gender. Block three contained the three two-way interaction effects. Overall R squared was not significant. At step two, condition emerged as a significant predictor ($t = -2.2$, $p < .03$). At step three, condition remained the only significant predictor ($t = -2.5$, $p < .02$).

The same regression analysis was performed for humorous situations only. For this analysis, R squared was significant at each step. For block one, social anxiety ($t = 2.4$, $t < .02$) and fear of negative evaluation ($t = -3.0$, $p < .005$) emerged as significant predictors. Overall R squared was .27, $F = 2.5$, $p < .05$). On block two, these remained significant and companion sex was also a significant predictor ($t = 2.3$, $p < .02$). Overall R squared was .39 ($F = 2.8$, $p < .02$). On block three, after entry of the companion sex by sex interaction, companion sex was no longer significant, but social anxiety and fear of negative evaluation remained significant. Overall R squared improved to .40 ($F = 2.5$, $p < .03$) from Step 2 to Step 3.

The same analysis for embarrassing situations only yielded no significant predictors.

Regression Analysis: PRS Threat Measure. A hierarchical regression analysis predicting PRS threat was conducted using the PRS threat measure as the predicted variable, and adding the personality variables as predictors. Fear of negative evaluation, social anxiety, self-deceptive enhancement, and self-esteem were entered in the first block. The second block consisted of companion sex, condition, and subject gender. Block three contained the three two-way interaction effects. Although there were no significant individual predictors after Block one, R squared was .17 [$F = 3.97$, $p < .006$]. After Block two, R squared improved to .25 [$F = 3.53$, $p < .003$], and companion gender emerged as a significant predictor [$t = 2.2$, $p < .03$]. After Block three, R squared was .27 [$F = 2.6$, $p < .001$]. There were no significant individual predictors.

The same regression analysis was performed for humorous situations only. There were no significant predictors.

The same analysis was performed for embarrassing situations only. After Block one, R squared was .42 [$F = 6.49$, $p < .0005$]. Significant predictors were social anxiety [$t = 2.95$, $p < .005$] and self-deceptive enhancement [$t = -2.2$, $p < .03$]. After Block two, R squared was .44 [$F = 4.53$, $p < .002$]. Social anxiety [$t = 2.7$, $p < .009$] and self-deceptive enhancement [$t = -2.3$, $p < .02$] remained significant predictors. After Block three, the only significant predictor was social anxiety [$t = 2.7$, $p < .01$]

and R squared improved to .48 [F = 4.4, p < .002].

ANOVAs for Personality measures. As in Study 1, subjects were divided into thirds of the frequency distribution on the personality measures. Separate oneway ANOVAs using each personality factor were then conducted for both the response time measure and the threat measure. To look at interaction effects, top and bottom groups were used.

Response time measure. There was a significant main effect for Concern for Appropriateness [F (2,80) = 3.46, p < .04] such that subjects who scored high were faster to respond to the situations than the other two groups of subjects (see Table 19).

There were three 2-way interactions, a social anxiety by condition interaction [F (1,45) = 8.35, p < .007], a public self-consciousness by gender of subject interaction [F (1,48) = 6.88, p < .013], and a Social Desirability by companion gender interaction [F (1,52) = 4.19, p < .048] (see Tables 20, 21, & 22).

For social anxiety by condition, high SA subjects took longer in the humorous condition than the embarrassing condition. Low SA subjects took longer in the embarrassing condition than the humorous condition. For public self-consciousness by gender, high anxious males took longer than low anxious males, while low anxious females took longer than high anxious females. For social desirability by

companion gender, high SD subjects took longer when they were with a male friend, while low SD subjects took longer when they were with a female friend.

PRS Threat measure. Subjects who were high as opposed to low in social anxiety [F (2,68) = 4.02, p < .02] or fear of negative evaluation [F (2,72) = 6.29, p < .003] reported that they would feel more threatened by the situations. In addition, subjects who scored high on the Self Deceptive Enhancement Scale (SDE) [F (2,72) = 4.70, p < .01] reported feeling significantly less threat than subjects who scored low (see Table 23).

Table 19

Means and Standard Deviations for Response Time in Study 2

Personality Measure	M	(secs.)	SD	n
High Concern for Appropriateness	.39	(2.45)	.33	27
Middle Concern for Appropriateness	.64	(4.36)	.38	26
Low Concern for Appropriateness	.53	(3.38)	.37	27

Table 20

Means and Standard Deviations for Social Anxiety by Condition Interaction for Response Time in Study 2

Level of Social Anxiety	Condition: Humorous		Condition: Embarrassing	
High Social Anxiety	M=.67 SD=.49 n=6	(4.68)	M=.48 SD=.40 n=17	(3.02)
Low Social Anxiety	M=.46 SD=.12 n=11	(2.88)	M=.78 SD=.30 n=12	(6.03)

Table 21

Means and Standard Deviations for Subject Gender by Public Self-Consciousness Interaction for Response Time in Study 2

Level of Public Self-Consciousness	Subject Gender: Male		Subject Gender: Female	
High Public Self-Consciousness	M=.61 SD=.35 n=12	(4.07)	M=.24 SD=.23 n=13	(1.74)
Low Public Self-Consciousness	M=.48 SD=.44 n= 15	(3.02)	M=.69 SD=.40 n=9	(4.90)

Table 22

Means and Standard Deviations for Companion Gender by Social Desirability Interaction for Response Time in Study 2

Level of Social Desirability	Companion Gender	
	Male	Female
High Social Desirability	M=.56 (3.63) SD=.28 n=11	M=.39 (2.45) SD=.36 n=15
Low Social Desirability	M=.40 (2.51) SD=.44 n=13	M=.65 (4.47) SD=.39 n=14

Table 23

Means and Standard Deviations for the PRS Threat Measure in Study 2

Personality Measure	Third		
	High	Middle	Low
Social Anxiety**	M=72.17 SD=19.71 n=23	M=62.62 SD=12.02 n=34	M=59.08 SD=14.11 n=24
Fear of Negative Evaluation**	M=72.42 SD=18.0 n=24	M=60.74 SD=13.11 n=31	M=61.00 SD=14.41 n=26
Self-Deceptive Enhancement**	M=58.19 SD=13.7 n=27	M=64.11 SD=13.84 n=27	M=70.56 SD=17.69 n=27

* = $p < .05$, ** = $p < .01$

Number of Reversals. To look at the effect of personality variables on the number of times subjects make another person rather than the self the target of the humor or embarrassment (number of reversals), oneway ANOVAs were conducted using the upper and lower thirds on the personality measures. There was one significant effect. Subjects who scored high on the Index of Motivational Bias performed significantly more reversals than subjects who scored low [F (1,46) = 5.75, p < .02] (.82 vs. .32).

Discussion

The multivariate analysis of covariance indicated that the personality factors were related to the the PRS threat measure. The correlations indicate that the Social Anxiety factor and the Social Competence factor are significantly related to subjects' repsonses to the PRS. According to Nishikowa et al (1990) the PRS is designed to measure affect. The personality scales used in this research are measuring motivation. Therefore, it is assumed that once threat and personality (affect and motivation) are controlled for, the cognitive component of self presentation remains. In this paradigm, response time represents the cognitive component. The stepdown analysis allowed an assessment of the cognitive component after controlling for affect and motivation.

In the MANCOVA, the univariate effect for condition on response time remained after the covariates

(personality/motivation), threat (motivation/affect), and number of reversals (confound/behavior) were controlled for. The effect remains in the MANOVA (not controlling for personality) as well. Therefore, this finding indicates that the differences in response time between the conditions are due to something cognitive. It could be that the word "embarrassing" is acting as a prime which activates structures or processes that the word "humorous" does not. It could also be that the different words activate different memories, and subjects think about them and edit embarrassing items more than humorous ones. There are many interesting possibilities.

The significant effect for condition on the PRS Threat measure on the MANOVA is no longer significant when the personality factors are taken into account in the MANCOVA. This suggests that the effect was due to personality factors, and demonstrates the importance of controlling for personality when using paper and pencil dependent measures.

The replication of past findings for self-directed humor in the presence of same sex companions is important, because it shows that the finding is still a robust one, and that it is not lost when new manipulations and variables are added to the design.

IV. STUDY 3: TYPE OF COMPANION STUDY

If longer response times are the result of defensiveness in the face of a threatening situation, the presence of a threatening individual should increase defensiveness. Study 3 explored the effect of different types of companions on subjects' response to the stimulus situations. Specifically, more competent or popular companions should increase social anxiety (Schlenker & Leary, 1985), and activate social comparison processes (Jellison & Miller, 1977; Festinger, 1954) It is hypothesized that this should increase response times.

Method

Subjects. Eighty undergraduate psychology students (40 males and 40 females) participated in the study in partial fulfilment of their psychology course requirement.

Personality Scales. The same personality scales were used as in Studies 1 & 2: the Index of Motivational Bias (Paulhus, 1989), the Balanced Index of Desirable Responding (Paulhus, 1990), the Texas Social Behavior Inventory (Helmreich & Stapp, 1974), the Self-Consciousness Scale (Fenigstein, Scheier & Buss, 1975), the Bem Sex Role Inventory (Bem, 1974), the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984), the Concern for Appropriateness Scale (Wolfe, Lennox & Cutler, 1986), and the Brief Version of the Fear of Negative Evaluation Scale (Leary, 1983).

Scales were administered via computer, as in Study 2. Reliabilities, standard deviations, and means for the scales used in Study 3 are shown in Table 24.

Design & Procedure. The study was a 2 (gender of subject) X 2 (companion threat: high or low) X 2 (companion gender) factorial design. After responding to the questionnaires, subjects participated in the response time task.

All subjects were told that the experiment was a study of the humor process and the experimenter was interested in the kinds of things that people find humorous. All situations ended with the line, "What could happen to you personally that would be humorous?"

The study was a between-subject study, in other words, subjects either received situations with a high or low threat companion and either a male or female companion. Therefore, there were four types of imagined companions used in this study: a high threat male, a high threat female, a low threat male and a low threat female. In the bowling and tennis situations, companions were either better or worse at bowling or tennis than the subject. In the other two situations (walking with an umbrella and going to the movies), the companions were more or less popular than the subject. For example, a subject in the high threat male condition would receive situations in which the male companion is better at bowling and tennis and more popular

in the movies and umbrella situations. The rest of the procedure remained identical to that of Study 2.

Table 24

Means, Standard Deviations, and Reliability Coefficients for all scales used in Study 3

	M	SD	alpha
Texas Social Behavior Inventory (Self-Esteem)	42.63	9.40	.84
Protective Variability (Subscale of Concern for Appropriateness scale)	19.85	6.65	.85
Protective Social Comparison (Subscale of Concern for Appropriateness scale)	34.26	10.04	.88
Ability to Modify Self Presentation (Subscale of Revised Self-Monitoring Scale)	21.73	4.33	.75
Sensitivity to the Expressive Behavior of Others (Subscale of Revised Self-Monitoring Scale)	19.54	4.47	.81
Private Self-Consciousness (Feningstein, Scheier & Buss)	23.50	5.64	.67
Public Self-Consciousness (Feningstein, Scheier & Buss)	18.20	5.00	.77
Social Anxiety (Feningstein, Scheier & Buss)	13.00	5.21	.77
Self-Deceptive Enhancement (Subscale of Paulhus' Balanced Index of Desirable Responding)	83.11	13.00	.73
Impression Management (Subscale of Paulhus' Balanced Index of Desirable Responding)	67.10	16.34	.78
Socially Desirable Responding (Paulhus' Balanced Index of Desirable Responding)	150.20	23.34	.80
Fear of Negative Evaluation (Leary)	37.80	8.67	.87

Table 24, continued

	M	SD	alpha
Revised Self-Monitoring (Wolfe, Lennox & Cutler)	41.26	7.24	.79
Threat (Present Reactions Scale)	59.90	17.82	.91
Emotion-Related Experience (Subscale of PRS)	19.28	7.11	.87
Emotion Management (Subscale of PRS)	22.50	6.32	.75
Plans of Action (Subscale of PRS)	18.11	7.40	.86

Manipulation Check. Subjects were given the Present Reactions Scale (Nishikawa, Stevens, Bryan, & Mayer, 1990) after the response time task. They were asked, as in Study 2, to give their response to the situations as a whole. Doing this allowed for the assessment of the degree of threat produced by the different companions. It was expected that subjects in the high-threat conditions would express feeling more threatened than subjects in the low threat conditions.

As in Study 2, use of the questionnaire format in addition to the response time measure allowed a comparison of both measures.

It was expected that response times would be longer in the high threat conditions than in the low threat conditions. Based on the findings of my earlier studies, it was also predicted that males would have longer response

times in the male-other conditions than in the female-other conditions. There should be no differences for female subjects.

Results

Correlations. Correlations between the Personality Factors and the dependent measures are presented in Table 25. As in Study 2, Personality Factors 1 and 2 were significantly related to PRS Threat.

Table 25

Pearson Correlations Between Personality Factors and Dependent Variables for Study 3

	Social Anxiety	Social Competence	IM
LMEANRT	.04	.01	-.15
PRS THREAT	.30**	-.25*	-.02
REVERSALS	.17	.11	-.01

IM = Impression Management

LMEANRT = Log of Mean Response Time

Multivariate Analysis of Variance. A 2 x 2 x 2 multivariate analysis of variance was conducted. Effects of condition, companion gender, gender, and their interactions were assessed by univariate analysis as well as stepdown analysis. As in previous analyses, PRS Threat was given highest priority in the stepdown analysis, followed by number of reversals and log mean response time.

Again, the reason for this order was so that the

effects on response time could be assessed after adjustment for threat and reversals. Results of these analyses are summarized in Table 26.

Using Wilks' criterion, multivariate tests of significance revealed that the combined DVs (PRS Threat, reversals, and log mean response time) were significantly related to the condition by companion gender interaction [F (3,70) = 3.64, $p < .02$].

There were two significant univariate effects. There was a significant univariate effect for condition by companion gender on number of reversals [F (1,72) = 4.28, $p < .04$] and response time [F (1,72) = 5.92, $p < .02$]. Both effects remained significant after controlling for the other two DVs in the stepdown analysis (see Table 26).

Table 26

Tests of Condition (High or Low Threat Companion), Companion Gender, Subject Gender and their Interactions for Study 3

IV	DV	Univariate F	df	Stepdown F	df	alpha
Gender	Threat	2.09	1,72	2.09	1,72	.152
	Revs	.03	1,72	.20	1,71	.657
	LMRT	2.88	1,72	2.41	1,70	.125
Condition	Threat	.91	1,72	.91	1,72	.343
	Revs	.91	1,72	.60	1,71	.443
	LMRT	.95	1,72	1.04	1,70	.310
Companion Gender	Threat	.15	1,72	.15	1,72	.702
	Revs	3.10	1,72	2.87	1,71	.090
	LMRT	.54	1,72	.46	1,70	.500
Gender x Condition	Threat	.00	1,72	.00	1,7	1.000
	Revs	.23	1,72	.23	1,71	.630
	LMRT	1.11	1,72	1.08	1,70	.300
Gender x Companion Gender	Threat	1.03	1,72	1.03	1,72	.313
	Revs	.10	1,72	.27	1,71	.603
	LMRT	.57	1,72	.65	1,70	.423
Condition x Companion Gender	Threat	.41	1,72	.41	1,72	.522
	Revs	4.28*	1,72	4.92	1,71	.030
	LMRT	5.92**	1,72	5.23	1,70	.020
Gender x Condition x Companion Gender	Threat	.31	1,72	.31	1,72	.579
	Revs	.91	1,72	.73	1,71	.396
	LMRT	.51	1,72	.43	1,70	.512

* = $p < .05$
** = $p < .01$
Revs = Reversals
LMRT = Log Mean Response Time

Multivariate Analysis of Covariance. A 2 (gender of subject) by 2 (gender of imagined companion) by 2 (condition: high or low companion threat) between-subjects analysis of covariance was performed on three dependent variables, PRS Threat, Number of Reversals, and Log of Mean Response Time. Adjustment was made for three covariates: Social Anxiety (Factor 1), Social Competence (Factor 2) and Impression Management (Factor 3).

Multivariate tests of significance revealed that the combined DVs were not significantly related to the combined covariates, condition, gender, companion gender, the gender by condition interaction, the companion gender by subject gender interaction or the three way-interaction. However, using Wilk's criterion, the combined DVs were significantly related to the condition by companion gender interaction [$F(3,67) = 3.14$, $p < .03$].

As in Study 2, effects of condition, companion gender, gender, and their interactions were assessed after adjusting for the covariates by univariate analysis as well as stepdown analysis. PRS Threat was given highest priority in the stepdown analysis, followed by number of reversals and log mean response time. The reason for this order was so that the effects on response time could be assessed after adjustment for personality covariates, threat, and reversals. Results of these analyses are summarized in Table 27.

There was a significant univariate effect for the covariates on the PRS Threat measure [F (3,69) = 4.22, p < .008], such that subjects who were socially anxious reported more threat than other subjects.

When controlling for the covariates, there was a univariate effect for response time on the condition by companion gender interaction [F (1,69) = 5.26, p < .03]. Subjects took longer to think of endings when they were with a high threat female or a low threat male. This effect was also significant on the stepdown analysis, when controlling for the effect of threat and reversals [F (1,67) = 4.48, p < .04].

Also when controlling for the covariates, there was a marginally significant univariate effect for number of reversals on the condition by companion gender interaction [F (1,69) = 3.52, p < .06]. Subjects made significantly fewer reversals in the low threat female condition than in the other three conditions. This effect was significant on the stepdown analysis when controlling for threat [F (1,68) = 4.14, p < .05].

Table 27

Tests of Condition (High or Low Threat Companion), Companion Gender, Subject Gender and their Interactions With Personality Factors 1, 2, and 3 as Covariates for Study 3

IV	DV	Univariate F	df	Stepdown F	df	alpha
Covariates	Threat	4.22**	3,69	4.22	3,69	.008
	Revs	.97	3,69	.91	3,68	.439
	LMRT	.17	3,69	.35	3,67	.792
Gender	Threat	3.11	1,69	3.11	1,69	.082
	Revs	.11	1,69	.44	1,68	.508
	LMRT	1.94	1,69	1.33	1,67	.252
Condition	Threat	1.59	1,69	1.59	1,69	.210
	Revs	.99	1,69	.57	1,68	.453
	LMRT	1.00	1,69	1.24	1,67	.268
Companion Gender	Threat	.44	1,69	.44	1,69	.511
	Revs	2.47	1,69	2.12	1,68	.150
	LMRT	.41	1,69	.30	1,67	.583
Gender x Condition	Threat	.00	1,69	.00	1,69	1.000
	Revs	.37	1,69	.38	1,68	.538
	LMRT	1.10	1,69	1.07	1,67	.303
Gender x Companion Gender	Threat	1.05	1,69	1.05	1,69	.208
	Revs	.22	1,69	.46	1,68	.502
	LMRT	.56	1,69	.72	1,67	.400
Condition x Companion Gender	Threat	.53	1,69	.53	1,69	.468
	Revs	3.52*	1,69	4.14	1,68	.046
	LMRT	5.26**	1,69	4.48	1,70	.038
Gender x Condition x Companion Gender	Threat	.25	1,69	.25	1,69	.616
	Revs	.51	1,69	.39	1,69	.534
	LMRT	.47	1,69	.39	1,69	.536

* = $p < .05$
** = $p < .01$
Revs = Reversals
LMRT = Log Mean Response Time

Table 28

Means and Standard Deviations for Log Mean Response Time in Study 3

Condition	Companion Gender	
	Male	Female
Low Threat	M=.65 SD=.27 n=19	M=.54 SD=.36 n=18
High Threat	M=.49 SD=.34 n=20	M=.74 SD=.23 n=18

Table 29

Means and Standard Deviations for Number of Reversals in Study 3

Condition	Companion Gender	
	Male	Female
Low Threat	M=1.75 SD=1.45 n=20	M=.55 SD=.88 n=20
High Threat	M=1.40 SD=1.5 n=20	M=1.50 SD=1.57 n=20

In the tennis and bowling situations companion ability was manipulated and in the other two situations companion popularity was manipulated. To justify the combining of the two response times into one composite response time score, the correlation between response times for popularity and ability was determined. It was found that the correlation

was .55 [$p < .001$].

Despite this high correlation, an analysis was done to explore differences, if any, between subjects' reactions to the two types of operationalizations of threat (ability versus popularity), two 2 (gender of subject) X 2 (companion threat) X 2 (companion gender) analyses of variance were conducted using response time for the bowling and tennis situations, and response time for the umbrella and movies situations as dependent variables. For ability, there was a trend toward a condition by companion gender interaction [$F(1,74) = 3.61$, $p < .062$] such that subjects took longer to think of endings when the companion was a low threat, as opposed to a high threat male, while they took longer to think of endings when the companion was a high threat, as opposed to a low threat, female. For popularity, this interaction effect was significant [$F(1,74) = 5.47$, $p < .022$] (see Table 30).

Table 30

Means and Standard Deviations for Popularity and Ability Response Times in Study 3

Condition	Companion Gender: Male	Companion Gender: Female
Ability		
Low Threat	M=.60 SD=.29 n=19	M=.43 SD=.41 n=18
High Threat	M=.42 SD=.41 n=20	M=.56 SD=.27 n=18
Popularity		
Low Threat	M=.64 SD=.32 n=19	M=.58 SD=.38 n=18
High Threat	M=.50 SD=.34 n=20	M=.82 SD=.29 n=18

Reversals. When number of reversals was used as a dependent variable, there was a significant companion gender by condition interaction [F (1,79) = 4.29, p < .042]. Subjects made one third as many reversals when the companion was a low threat female as opposed to a low threat male. For high threat companions, gender did not make a difference (see Table 29).

Regression Analysis: Response time measure. A regression analysis predicting response time was done using the personality variables as predictors. Social anxiety, protective variability, protective social comparison, fear of negative evaluation, self-deceptive enhancement, and self-esteem were entered in Block one. R squared was .17 [F = 1.61, p < .04]. Protective variability was a significant predictor [t = 2.9, p < .005]. In Block two, the main effects were entered. R squared was no longer significant, but protective variability remained a significant predictor [t = 2.8, p < .007]. On Block three, the interactions were entered. R squared was not significant, but there were two significant predictors, protective variability and condition by companion sex [t = 2.0, p < .05].

The same analysis was done using the "low threat other" situations only. There were no significant effects.

For "high threat other" situations only, the same analysis was done. After Block one, R squared was not significant, but protective variability [t = 2.4, p < .02] and self esteem [t = -2.1, p < .04] were significant predictors. After Block two, there were no significant predictors, and R squared was not significant.

Regression Analysis: PRS Threat Measure. A regression analysis predicting PRS threat was done using the personality variables as predictors. Social anxiety, fear of negative evaluation, self-esteem and public self

consciousness were entered in Block one. R squared was .16 [F = 3.66, p < .008]. None of the variables alone was a significant predictor. On Block two, the main effects were entered. R squared was .2 [F = 2.54, p < .02]. There were no significant predictors. On Block three, the interactions were entered. R squared was not significant, and there were no significant predictors.

The same analysis was done using "low threat other" situations only. On Block one, R squared was not significant, but self esteem emerged as a significant predictor [t = -2.3, p < .03]. On Block two, R squared was still not significant, but self esteem remained a significant predictor [t = -2.2, p < .04]. On Block three, R squared was not significant, and the effect of self-esteem remained the same.

For "high threat other" situations only, the same analysis was done. After Block one, R squared was .32 [F = 4.2, p < .007]. There were no significant single predictors. After Block two, R squared improved to .34 [F = 2.8, p < .02], but there were still no significant predictors. After Block three, there was no change.

ANOVAS for Personality measures

Response time measure. Personality measures were divided into thirds, and ANOVAs were conducted to examine the effect of the personality measures on response time. There were two significant effects. There were significant

main effects for ability to modify self presentation and protective variability such that subjects who scored low were faster than subjects in the other two groups (see Table 31).

Table 31

Means and Standard Deviations for Log of Mean Response Time in Study 3

Personality Measure	Third		
	Top Third	Mid Third	Bottom Third
Ability to Modify Self Presentation*	M=.66 (4.6) SD=.29 n=23	M=.67 (5.5) SD=.32 n=30	M=.44 (2.8) SD=.28 n=22
Protective Variability*	M=.69 (4.9) SD=.29 n=23	M=.61 (4.1) SD=.32 n=26	M=.48 (3.0) SD=.30 n=26

* = $p < .05$

PRS Threat Measure. Subjects who were high as opposed to low in social anxiety or fear of negative evaluation or low as opposed to high on the self esteem scale reported that they would feel more threatened by the situations.

In addition, subjects who scored high on the Self Deceptive Enhansement Scale reported that they would feel significantly less threatened in the situations than the subjects who scored low (See Table 32).

Table 32

Means and Standard Deviations for PRS Threat Measure in Study 3

Personality Measure	Third		
	Top Third	Mid Third	Bottom Third
Self Deceptive Enhancement**	M= 50.76	65.10	62.64
	SD=15.56	16.26	18.83
	n = 25	30	25
Social Anxiety**	M=64.40	63.17	51.36
	SD=17.80	15.03	18.59
	n=25	30	25
Fear of Negative Evaluation*	M= 65.00	61.41	53.40
	SD=18.60	18.32	15.00
	n=26	27	27
Self-Esteem**	M=50.50	61.51	68.20
	SD=16.50	15.32	20.00
	n= 23	39	18

* = $p < .05$, ** = $p < .01$

There was a significant interaction between public self-consciousness and gender of subject [F (1,48) = 4.45, $p < .042$], such that for females, high publicly self-conscious subjects reported more threat than low PSC subjects, while for males there was no difference (see Table 33).

Number of Reversals. To look at the effect of personality variables on the number of times subjects make another person rather than the self the target of the humor, (number of reversals), oneway ANOVAs were conducted using the upper and lower thirds on the personality measures.

There were two significant effects. Subjects who scored low on the self-esteem scale [F (1,40) = 5.79, p < .02] made more reversals than subjects who scored high (1.83 vs. .86). In addition, subjects who scored high on the self-monitoring scale [F (1,52) = 5.59, p < .02] made more reversals than subjects who scored low (1.74 vs. .84, see Table 34).

Table 33

Means and Standard Deviations for the Interaction Between Subject Gender and Public Self-Consciousness on the PRS Threat Measure in Study 3

	Subject Gender	
	Male	Female
High Public Self-Consciousness	M=56.27 SD=11.05 n=11	M=68.14 SD=22.70 n=14
Low Public Self-Consciousness	M=56.38 SD=19.64 n=13	M=48.91 SD=14.15 n=11

Table 34

Means and Standard Deviations for Number of Reversals in Study 3

Personality Measure	Level	
	High	Low
Self-Esteem*	M=.86 SD=1.01 n=23	M=1.83 SD=1.54 n=18
Self-Monitoring*	M=1.74 SD=1.55 n=27	M=.84 SD=1.15 n=26

* = $p < .05$

Discussion

As in Study 2, the multivariate analysis of covariance and the correlations revealed that the personality factors were related to the PRS Threat measure. The only other significant effects for Study 3 were for the condition by companion gender interaction. The effect for response time is significant when controlling for the personality factors, threat, and reversals. This finding indicates that the interaction is due to cognitive factors.

Because this effect is significant for reversals when the effect of the personality factors (in the MANCOVA) and when threat is controlled for (in the stepdown analysis in MANOVA), this suggests that the reversals measure is tapping a component other than an affective or motivational one.

In Study 3, subjects took longer to respond to situations in which they were with a high threat female or a low threat male. However, this effect was not found for threat (subjects did not indicate feeling more threat in those conditions where they took longer). Because motivation was controlled for and subjects did not feel more threatened by high threat females or low threat males, long response times were likely due to the implausibility of "high threat females" and "low threat males". The findings from the stepdown analysis strengthens this interpretation. The literature on gender, power, and nonverbal behavior (Deaux & Taynor, 1973; Mayo & Henley, 1981; Porter & Geis, 1981) also

supports this viewpoint. The concept of these companions was probably less cognitively accessable than "high threat males" and "low threat females". In other words, subjects probably had a harder time imagining these companions than high threat males or low threat females. Further evidence that the subjects actually felt less threatened in the high threat female condition comes from the reversals data. Subjects performed significantly fewer reversals in the presence of low threat females as opposed to low threat males.

V. GENERAL DISCUSSION

As indicated in the introduction to this research, it is clear that there are cognitive and motivational components involved in self presentation. The three studies reported here attempt to separate the effects of cognitive and motivational variables by using measures which are related to each component. Personality measures were utilized that tap the motivational component of self-presentation. The PRS Threat measure (Nishikowa et al, 1990) is an affective measure and the response time measure is widely accepted as a measure of cognitive accessibility (see Fazio, 1990).

Fiske and Taylor (1984) discuss the importance of the use of multiple methodologies in social cognition research. One of the main goals of the present research was to use multiple measures (personality measures, response time, PRS Threat measure, reversals) to understand past findings (Neyhart, 1985; 1988; 1990). In order to explain what a long response time might mean, several measures new to this research program were were utilized. Study 1 used an open-ended questionnaire format to examine qualitatively differences in subjects' views on humor and embarrassment. In addition, the same threat measure that was to be used in conjunction with response time in Studies 2 and 3 was used to quantify subjects' affective responses to humor and

embarrassment. Several personality scales that were judged to be relevant to motives in self presentation (such as defensiveness) were also used.

Methodological Implications

As noted, an important focus of this work was the emphasis on multiple measures. It is important to compare and contrast the results obtained for response time, the PRS Threat Scale, and reversals (the dependent measures used in these studies) in order to draw conclusions about what each is measuring, and to make recommendations for their future use.

The present research investigated the effect of personality measures and situational variables such as gender and threat value of companion on subjects' response time to think of a self-directed humorous or embarrassing ending for a social situation. As mentioned, social psychology is often defined as the study of how the real or imagined presence of others affects our behavior. The unique contribution of these studies is that the effect of imagined others on subtle responses (i.e., response time) is being measured.

In Study 2, condition (humorous vs. embarrassing) had the most effect on response time. Subjects took longer to respond when the self-directed situation was described as embarrassing than when it was described as humorous. The stepdown (controlling for other aspects of self

presentation) analysis indicated that the effect had its basis in cognition. In Study 3, where degree of threat (relative popularity and ability of companion) was manipulated, as well as gender of companion, differences in response time also seemed to reflect a cognitive aspect of social interaction. When controlling for threat and personality factors, there was still an effect for response time. Subjects had difficulty imagining high threat females and low threat males. This finding could have its roots in the availability heuristic (Tversky & Kahneman, 1973).

Response Time and Personality. Because gender schema was found to be related to patterns of response time in past research (Neyhart, 1988), it was expected that other personality scales, especially those that were relevant to the task (such as self-esteem and social anxiety) would be useful for predicting response time. However, the MANOVAs provided evidence that the personality factors were more useful for predicting reported threat on the PRS than for predicting response time. The regressions for individual scales in Study 2 indicated that social anxiety and fear of negative evaluation were significant predictors of response time, but only in the humorous condition. This is interesting, because it could be that the subjects who were high in FNE and SA saw in the humorous situations the opportunity for negative evaluation that other subjects did not. In Study 3, protective variability and self-esteem were

significant predictors of response time, but only in the high threat other condition. Again, the situation was important in determining which subjects would experience threat.

PRS Threat Measure. The purpose of utilizing the PRS Threat measure was to have an independent measure of the amount of affect that subjects felt in the situations. In Study 3, there were no effects for the manipulation check. The MANCOVA reveals that this is because PRS Threat seems to be tapping a dispositional element. The Study 3 results suggest that the PRS may not be sensitive to subtle situational manipulations, only to strong ones (Study 2). Another explanation for lack of effects for condition for the PRS in Study 3 is that, because of the self-report nature of the measure, subjects were unwilling to report that they were threatened by the high threat other. Perhaps the manipulation was too transparent, and subjects were aware of the expected response, and reacted to that knowledge.

PRS Threat and Personality Measures. The PRS Threat measure did provide construct validity for several scales used in this research. Subjects who were high on personality measures that identify individuals who are less socially adept tended to express that they would be more threatened in the imagined social situations than subjects who were low on the measures. This finding also supports the validity of

the use of imagined situations in social psychological research. However, the fact that the finding for the condition effect in Study 1 was less strong than that in Study 2 (the effect was only found for the ERE subscale) points to the fact that the imagined social situation needs to be very involving for the subject.

Reversals. The use of number of times subjects made another person the target of the situation (when the directions called for a self-directed response) also proved to be a subtle yet informative measure. Reversals were found to be related to measures of motivational bias, self-esteem, and self-monitoring. However, it is not clear where the basis for subjects' reversals lies, because in Study 3, there was a significant effect for reversals when motivation and threat were controlled. This suggests a cognitive basis, although it is counter-intuitive. It could be that the measure taps a cognitive bias of some type. Future research should attempt to clarify this behavior.

Future Research

Future analysis of the endings that the subjects who score high and low on different personality scales provide for the situations could provide further insight. If certain subjects take longer to think of endings for the self-directed situations, it may be because they are busy coming up with "face saving" (Goffman, 1955; Schlenker, 1980) endings in which they may come out looking less

foolish than the subjects who are quick to respond (low self-esteem subjects). One crude measure of "face saving" would be the length of subjects responses. Some subjects may write simply, "I could trip and fall," while a "face saving" subject might write, "I could trip and fall, but not hurt myself, or no one would see." Perhaps a better measure would be to time how long it takes subjects to complete their responses in addition to how long it takes them to begin to respond. Timing or measuring the length of subjects' responses would be a relatively simple measure which could prove interesting.

A new direction in the analysis of the endings would be to do a linguistic analysis of the endings. Perhaps some subjects may tend to complete the situations using passive language. For example, a subject could write, "the ball could be dropped", or "the food could be spilled." This way of responding is less threatening than the active ("I could drop the ball").

Linguistical manipulations of the stimulus situations could also provide interesting data. The results of these studies indicated the importance of cognitive variables. It is possible that phrasing the situations actively, as in "What could happen that would make you embarrassed?" would be a more powerful stimulus than "What could happen that would be embarrassing?"

Other methodological approaches could also be taken.

Perhaps having the subjects write their responses makes the response more "private" than if the subject had to speak his or her endings out loud to an experimenter, or into a tape recorder. Public versus private manipulations are very popular in self presentation research, and should be added to the present paradigm.

Psychometric Analyses. The factor analysis of the personality scales used in these studies provided much useful data. It will be interesting to examine this data more closely. The two-dimensional result has implications for Baumeister, et al.'s (1989) theory of self-esteem and self presentation. Rather than thinking of self presentation in terms of high versus low self-esteem, the factor analysis done here suggests that it could be that there are two important dimensions in self presentation: Social Anxiety and Social Competence. Further study may provide a clearer picture of the nature of self presentation.

Because the use of the personality measures appears to be promising, there are many possibilities for further research using this paradigm. It would be useful to return to the paradigm which utilized the self versus other manipulation. It is likely that measures such as interpersonal orientation (Swap & Rubin, 1983), and empathy score on the PRS (Nishikawa, Stevens, Bryan, & Mayer, 1990) could be used much like the personality measures used here to predict response time to other directed situations. It

would be expected that subjects who are more empathetic (females?) would show longer response times in friend-directed situations.

Conclusion

This research demonstrates that there is a need to take the cognitive as well as the motivational aspect of self presentation into account. Since social psychologists routinely focus on cognitive variables in their research, this seems to be a logical step. Psychologists assume that there are elements of cognition and motivation in all behavior. This research demonstrates that it may be possible, using measures that reflect each element, to see the relative contribution of each. Future research on self presentation should continue to focus on the relation between motivation and cognition, and to identify other methods to measure both aspects.

Markus and Nurius (1986) recognized the need to integrate the two approaches. They invoked the concept of "possible selves" in an effort to provide the essential link between the self and cognition to motivation and affect. They posit that individuals have, as part of their self-schema (Markus, 1977) knowledge of what is possible for the self to achieve. They claim that possible selves function as incentives or motivation to behave in certain ways. When negative possible selves are activated, affect is aroused, and behavior is affected. The link between this notion and

the present research needs to be explored. It is possible that the embarrassing situations activate negative possible selves (the "clumsy" self, the "laughed-at self", etc.), while the humorous ones activate other kinds of possible selves depending on the person. A socially competent person may imagine him or herself as the center of attention (positive possible self) while a socially anxious person may imagine negative possible selves. Future research will attempt to use this notion to further explore the relation between cognition and motivation in self presentation.

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REFERENCE NOTES

1. Data was collected using the BSRI, but results will not be reported here. This data was collected for future analysis.

2. Several researchers have found that there is great potential for subject pool contamination when subjects are debriefed immediately after they participate in an experiment (Klein & Cheuvront, 1990). These studies have found that subjects are very likely to talk about the experiment with other potential subjects despite the experimenter's request that they not do so (Lichtenstein, 1970). Such behavior on the part of subjects can be a threat to the internal validity of experiments (Marans, 1988). For this reason it was decided that debriefing would be delayed. However, it was also important that the subjects understand the purpose for the delayed debriefing (See Kimble, 1987). Therefore, subjects were told about this research and informed that as soon as the experimenter was finished running subjects, a debriefing would be available.

3. The base-10 log is often used in reaction time research (for a review, see Fazio, 1990) to reduce the skewness of the data. In this research, subjects were also dropped if they exhibited extremely short or long response times.

APPENDIX B: DEBRIEFINGS

DEBRIEFING (Study 1)

This study was done to explore the question of whether there are differences in the way that men and women perceive and react to humorous situations versus embarrassing situations. Half of the subjects received a questionnaire asking questions about their response to self-directed **humorous** situations while the other half received a questionnaire which asks them to give information regarding their response to self-directed **embarrassing** situations.

The questionnaires prepared for this research asked subjects to provide embarrassing or humorous situations that could happen to a member of their gender when they are with a same or opposite sex companion. Then the subjects were asked to put themselves in the place of the person to whom the event is occurring and to answer a number of questions about their response to the situation.

To assess your response to the humorous and embarrassing situations that you imagined, you completed the Present Reactions Scale. Several personality scales were also used. These are: the Index of Motivational Bias (Paulhus, 1989), the Balanced Index of Desirable Responding (Paulhus, 1990), the short form of the Texas Social Behavior Inventory (Helmreich & Stapp, 1974), which is a measure of self-esteem, the Self-Consciousness Scale (Fenigstein, Scheier & Buss, 1975), which contains subscales measuring social anxiety, public and private self-consciousness, the Bem Sex Role Inventory (Bem, 1974), the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984), the Concern for Appropriateness Scale (Wolfe, Lennox & Cutler, 1986) and the Brief Version of the Fear of Negative Evaluation Scale (Leary, 1983).

It is expected that men will respond similarly to the threat-related questions on the P.R.S., regardless of whether the questions are about humor or embarrassment. In addition, males will be more threatened when they are with a male friend than a female friend in both humorous and embarrassing situations. Women, on the other hand, should show a tendency to be more threatened by situations explicitly defined as embarrassing than they are to situations labeled as humorous. In addition, women should view the humorous situations as significantly less threatening than the men do.

With regard to the other personality measures, socially anxious subjects or subjects who are high in public self-consciousness should report feeling more anxiety in the situations that they make up than other subjects do.

If you have any questions about my research, please feel free to call me at 742-3561. Thank you very much for your participation.

DEBRIEFING (Study 2)

One type of psychologist is interested in the ways that the real or imagined presence of other people affects our behavior. This study dealt with something that these psychologists call **Self-Presentation**, which is the process by which we try to shape what others think of us. Self-presentations can take on many different forms. They may be conscious or unconscious, accurate or misleading, and intended for real or imagined audiences.

In this study, you were asked to think of endings for four hypothetical social situations. I wondered how different kinds of people (people high & low in self-esteem and social anxiety) would deal with the dilemma of having to place themselves in a potentially embarrassing or humorous social situation. While you were thinking of your endings, the experimenter was timing how long it took you to think of a response.

In my past research, I demonstrated that men took more time to begin writing endings for self-directed humorous situations (that is, a situation in which the self is the butt of a humorous situation) and less time to think of endings for friend-directed situations. Women, on the other hand, took longer for friend-directed than self-directed situations. In another experiment I found that the gender of the subjects' imagined companion in the hypothetical situation was important. In the experiment, some subjects were told to imagine that they were with a male friend, others with a female friend. Male subjects who imagined themselves with a male companion took longer to think of a self-directed ending than the male subjects who were imagining a female companion. Male subjects imagining a female friend took more time with the other-directed situation than the self-directed situation. This was a surprising shift, since in previous experiments (in which a same sex companion was imagined), males took longer in the self-directed condition than the other-directed condition. Females consistently took longer to think of an other-directed ending, regardless of the gender of the companion they imagined. Therefore, this study showed male subjects to be more influenced by the gender of companion than females.

These findings can be explained in terms of **self-presentation**. It seems that men in the "male friend" condition are more threatened by appearing incompetent and thus may feel the need to manage a "manly" impression. Therefore, when in the imagined presence of another male, they are less willing to put themselves in an awkward position than when they imagine themselves with a female friend. Perhaps men are more concerned with maintaining their self image in the presence of another man than in the presence of a woman. Females, on the other hand, seem to

remain characteristically "nurturant" of the friend, regardless of that friend's gender.

The study that you just participated in examined the hypothesis that males and females would respond differently to humorous and embarrassing situations. This was explored by manipulating the type of situation that subjects received (humorous versus embarrassing) and by measuring how long it took subjects to think of endings for the situations. In addition, the gender of the subject's companion was also varied. It is expected that the more threatened you felt by the situation you created, the longer it would take you to respond. Based on past research, I expect males to be more threatened when they are with another male than a female, and gender of companion should not make a difference for females. However, it is expected that females will be more threatened by situations that are labeled as "embarrassing" than situations that are labeled "humorous."

The personality scales that you responded to on the computer will be used to assess whether subjects with different personality characteristics respond differently to the situations. These scales were: the Index of Motivational Bias (Paulhus, 1989), the Balanced Index of Desirable Responding (Paulhus, 1990), the short form of the Texas Social Behavior Inventory (Helmreich & Stapp, 1974), which is a measure of self-esteem, the Self-Consciousness Scale (Fenigstein, Scheier & Buss, 1975), which contains subscales measuring social anxiety, public and private self-consciousness, the Bem Sex Role Inventory (Bem, 1974), the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984), the Concern for Appropriateness Scale (Wolfe, Lennox & Cutler, 1986), and the Brief Version of the Fear of Negative Evaluation Scale (Leary, 1983).

It is expected that reaction time will be positively correlated with self-esteem. In other words, it is predicted that subjects who score high in self-esteem will take longer to think of endings for the situations, while subjects who are low in self-esteem will take less time.

Thank you for your participation. If you have any questions or comments, please feel free to call Mae Lynn Neyhart at 862-2360 or 742-3561.

DEBRIEFING (Study 3)

One type of psychologist is interested in the ways that the real or imagined presence of other people affects our behavior. This study dealt with something that these psychologists call **Self-Presentation**, which is the process by which we try to shape what others think of us. Self-presentations can take on many different forms. They may be conscious or unconscious, accurate or misleading, and intended for real or imagined audiences.

In this study, you were asked to think of endings for four hypothetical social situations. I wondered how different kinds of people (people high & low in self-esteem and social anxiety) would deal with the dilemma of having to place themselves in a potentially embarrassing social situation. While you were thinking of your endings, the experimenter was timing how long it took you to think of a response.

In my past research, I demonstrated that men took more time to begin writing endings for self-directed humorous situations (that is, a situation in which the self is the butt of a humorous situation) and less time to think of endings for friend-directed situations. Women, on the other hand, took longer for friend-directed than self-directed situations. In another experiment I found that the gender of the subjects' imagined companion in the hypothetical situation was important. In the experiment, some subjects were told to imagine that they were with a male friend, others with a female friend. Male subjects who imagined themselves with a male companion took longer to think of a self-directed ending than the male subjects who were imagining a female companion. Male subjects imagining a female friend took more time with the other-directed situation than the self-directed situation. This was a surprising shift, since in previous experiments (in which a same sex companion was imagined), males took longer in the self-directed condition than the other-directed condition. Females consistently took longer to think of an other-directed ending, regardless of the gender of the companion they imagined. Therefore, this study showed male subjects to be more influenced by the gender of companion than females.

These findings can be explained in terms of **self-presentation**. It seems that men in the "male friend" condition are more threatened by appearing incompetent and thus may feel the need to manage a "manly" impression. Therefore, when in the imagined presence of another male, they are less willing to put themselves in an awkward position than when they imagine themselves with a female friend. Perhaps men are more concerned with maintaining their self image in the presence of another man than in the presence of a woman. Females, on the other hand, seem to remain characteristically "nurturant" of the friend,

regardless of that friend's gender.

The study that you just participated in examined the hypothesis that when imagining oneself with high threat companions (people who are more popular or better at sports than you) would make a person more socially anxious, and therefore that person would find it more difficult to think of endings for the embarrassing situations. On the other hand, low threat companions would have the opposite effect.

The personality scales that you responded to on the computer will be used to assess whether subjects with different personality characteristics respond differently to the situations. These scales were: the Index of Motivational Bias (Paulhus, 1989), the Balanced Index of Desirable Responding (Paulhus, 1990), the short form of the Texas Social Behavior Inventory (Helmreich & Stapp, 1974), which is a measure of self-esteem, the Self-Consciousness Scale (Fenigstein, Scheier & Buss, 1975), which contains subscales measuring social anxiety, public and private self-consciousness, the Bem Sex Role Inventory (Bem, 1974), the Revised Self-Monitoring Scale (Lennox & Wolfe, 1984), the Concern for Appropriateness Scale (Wolfe, Lennox & Cutler, 1986), and the Brief Version of the Fear of Negative Evaluation Scale (Leary, 1983).

It is expected that reaction time will be positively correlated with self-esteem. In other words, it is predicted that subjects who score high in self-esteem will take longer to think of endings for the situations, while subjects who are low in self-esteem will take less time.

Thank you for your participation. If you have any questions or comments, please feel free to call Mae Lynn Neyhart at 862-2360 or 742-3561.

THE INDEX OF MOTIVATIONAL BIAS

One of the scales that you completed for this research provided you with bogus information. The information in the scale that indicated that certain traits were associated with either happiness in middle age or failure in marriage was completely untrue. There is no evidence that any of those traits predicts happiness or successful marriages. Actually, the two questionnaires contained the same adjectives (they were synonyms for each other). The only difference between the two scales was the way that the traits were introduced (either positively: happiness in middle age OR negatively: failed marriages). The reason for this deception was to allow the identification of those subjects who may systematically bias their answers so as to "look good." Remember, these scales are completely anonymous, so your answers are confidential. If you have any questions or concerns about any of the scales used in my research, please contact me in the department (862-2360) or at home (742-3561). Thank you again.

Mae Lynn Neyhart

APPENDIX C: STIMULUS SITUATIONS FOR STUDIES 2 & 3

Study 2

Humorous, Male Companion

You are eating in a fancy restaurant with a male friend. You are having a conversation while waiting for your food. The waitress is bringing your food. What could happen to you (personally)
that would be humorous?

You are bowling with a male friend. It's your first time bowling and it's your turn. What could happen to you (personally) that would be humorous?

You are playing tennis with a male friend. Your friend returns your serve, and you are able to get to the ball. What could happen to you (personally) that would be humorous?

You are walking down the street with a male friend. It is raining so you are carrying an umbrella. What could happen to you (personally) that would be humorous?

You are at the movies with a male friend. You are walking in after the picture has already begun. What could happen to you (personally) that would be humorous?

Humorous, Female Companion

You are eating in a fancy restaurant with a female friend. You are having a conversation while waiting for your food. The waitress is bringing your food. What could happen to you (personally) that would be humorous?

You are bowling with a female friend. It's your first time bowling and it's your turn. What could happen to you (personally) that would be humorous?

You are playing tennis with a female friend. Your friend returns your serve, and you are able to get to the ball. What could happen to you (personally) that would be humorous?

You are walking down the street with a female friend. It is raining so you are carrying an umbrella. What could happen to you (personally) that would be humorous?

You are at the movies with a female friend. You are walking in after the picture has already begun. What could happen to you (personally) that would be humorous?

Embarrassing, Male Companion

You are eating in a fancy restaurant with a male friend. You are having a conversation while waiting for your food. The waitress is bringing your food. What could happen to you (personally) that would be embarrassing?

You are bowling with a male friend. It's your first time bowling and it's your turn. What could happen to you (personally) that would be embarrassing?

You are playing tennis with a male friend. Your friend returns your serve, and you are able to get to the ball. What could happen to you (personally) that would be embarrassing?

You are walking down the street with a male friend. It is raining so you are carrying an umbrella. What could happen to you (personally) that would be embarrassing?

You are at the movies with a male friend. You are walking in after the picture has already begun. What could happen to you (personally) that would be embarrassing?

Embarrassing, Female Companion

You are eating in a fancy restaurant with a female friend. You are having a conversation while waiting for your food. The waitress is bringing your food. What could happen to you (personally) that would be embarrassing?

You are bowling with a female friend. It's your first time bowling and it's your turn. What could happen to you (personally) that would be embarrassing?

You are playing tennis with a female friend. Your friend returns your serve, and you are able to get to the ball. What could happen to you (personally) that would be embarrassing?

You are walking down the street with a female friend. It is raining so you are carrying an umbrella. What could happen to you (personally) that would be embarrassing?

You are at the movies with a female friend. You are walking in after the picture has already begun. What could happen to you (personally) that would be embarrassing?

Study 3

Low Threat Male

You are eating in a fancy restaurant with a male friend who is much less popular than you are. You are having a conversation while waiting for your food. The waitress is bringing your food. What could happen to you (personally) that would be humorous?

You are bowling with a male friend. You're a much better bowler than your friend. What could happen to you (personally) that would be humorous?

You are playing tennis with a male friend. You're a much better tennis player than your friend. What could happen to you (personally) that would be humorous?

You are walking down the street with a male friend, who is much less popular than you are. It is raining so you are carrying an umbrella. What could happen to you (personally) that would be humorous?

You are at the movies with a male friend, who is much less popular than you are. You are walking in after the picture has already begun. What could happen to you (personally) that would be humorous?

Low Threat Female

You are eating in a fancy restaurant with a female friend who is much less popular than you are. You are having a conversation while waiting for your food. The waitress is bringing your food. What could happen to you (personally) that would be humorous?

You are bowling with a female friend. You're a much better bowler than your friend. What could happen to you (personally) that would be humorous?

You are playing tennis with a female friend. You're a much better tennis player than your friend. What could happen to you (personally) that would be humorous?

You are walking down the street with a female friend, who is much less popular than you are. It is raining so you are carrying an umbrella. What could happen to you (personally) that would be humorous?

You are at the movies with a female friend, who is much less popular than you are. You are walking in after the picture has already begun. What could happen to you (personally) that would be humorous?

High Threat Male

You are eating in a fancy restaurant with a male friend who is much more popular than you are. You are having a conversation while waiting for your food. The waitress is bringing your food. What could happen to you (personally) that would be humorous?

You are bowling with a male friend. Your friend is a much better bowler than you are. What could happen to you (personally) that would be humorous?

You are playing tennis with a male friend. Your friend is a much better tennis player than you are. What could happen to you (personally) that would be humorous?

You are walking down the street with a male friend, who is much more popular than you are. It is raining so you are carrying an umbrella. What could happen to you (personally) that would be humorous?

You are at the movies with a male friend, who is much more popular than you are. You are walking in after the picture has already begun. What could happen to you (personally) that would be humorous?

High Threat Female

You are eating in a fancy restaurant with a female friend who is much more popular than you are. You are having a conversation while waiting for your food. The waitress is bringing your food. What could happen to you (personally) that would be humorous?

You are bowling with a female friend. Your friend is a much better bowler than you are. What could happen to you (personally) that would be humorous?

You are playing tennis with a female friend. Your friend is a much better tennis player than you are. What could happen to you (personally) that would be humorous?

You are walking down the street with a female friend, who is much more popular than you are. It is raining so you are carrying an umbrella. What could happen to you (personally) that would be humorous?

You are at the movies with a female friend, who is much more popular than you are. You are walking in after the picture has already begun. What could happen to you (personally) that would be humorous?